

# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 36009 Indigo, synthetic

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Version: 4

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### 1. Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1. Product Identifier

*Product Name:* Indigo, synthetic

*Article No.:* 36009

*UFI:* --

#### 1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

*Identified uses:*  
Pigment in artists colors.

*Uses advised against:*  
Not for foods or feed

#### 1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

*Company:* Kremer Pigmente GmbH & Co. KG

*Address:* Hauptstr. 41-47, 88317 Aichstetten, Germany

*Tel./Fax.:* Tel +49 7565 914480, Fax +49 7565 1606

*Internet:* www.kremer-pigmente.com

*EMail:* info@kremer-pigmente.com

*Importer:* --

#### 1.4. Emergency No.

*Emergency No.:* +49 7565 914480 (Mon-Fri 8:00 - 17:00)

#### 1.4.2 Poison Center:

### 2. Hazards Identification

#### 2.1. Classification of the Substance or Mixture

*Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)*

H373

Cat.: 2

*Specific target organ toxicity (repeated exposure), hazard category 2*

May cause damage to organs through prolonged or repeated exposure.

*Possible Environmental Effects:*

#### 2.2. Label Elements

*Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)*

*Hazard designation:*



GHS08-1

*Signal word:*

Warning

*Hazard designation:*

May cause damage to organs through prolonged or repeated exposure

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H373 exposure.

*Safety designation:*

P260a Do not breathe dust.  
P314 Get medical advice/attention if you feel unwell.

*Hazardous components for labelling:*

### 2.3. Other Hazards

## 3. Composition/Information on Ingredients

### 3.1. Substance

### 3.2. Mixture

*Chemical Characterization:* Vat dye. VAT Blue 1

*Information on Components / Hazardous Ingredients:*

2-(1,3-Dihydro-3-oxo-2H-indol-2-ylidene)-1,2-dihydro-3H-indol-3-one (STOT RE2; H373); REACH Reg. No. 01-21194B8933-22-0002	90 - 100 %	CAS-Nr: 482-89-3 EINECS-Nr: 207-586-9 EC-Nr:
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Sodium sulfate; REACH Reg. No. 01-2119519226-43-xxxx		CAS-Nr: 7757-82-6 EINECS-Nr: 231-820-9 EC-Nr:
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*Additional information:*

## 4. First Aid Measures

### 4.1. Description of the First Aid Measures

*General information:*

*Remove contaminated clothes immediately.  
Wash affected body parts thoroughly with soap and water.*

*After inhalation:*

*Supply fresh air and keep patient calm.  
Seek medical advice immediately.  
Give artificial respiration in case breathing is not regular or if it has stopped.*

*After skin contact:*

*Wash contaminated clothing before reuse.  
Remove contaminated clothing immediately. Wash off immediately with plenty of water and soap.  
If symptoms persist, consult a physician.*

*After eye contact:*

*Rinse open eyes with plenty of water for at least 15 minutes.  
Remove contact lens.  
Seek medical attention if irritation persists.*

*After ingestion:*

*Immediately get medical help.  
Do not induce vomiting.  
Never give anything by mouth to an unconscious person.*

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### 4. 2. Most important Symptoms and Effects, both Acute and Delayed

*Symptoms:*

*No further information available.*

*Effects:*

### 4. 3. Indication of any Immediate Medical Attention and special Treatment needed

*Treatment:*

*No information available.*

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## 5. Fire-Fighting Measures

### 5. 1. Extinguishing Media

*Suitable extinguishing media:*

*Use extinguishing media for surrounding fire.*

*Water mist, extinguishing powder, foam, carbon dioxide.*

*Unsuitable extinguishing media:*

*Water with full jet.*

### 5. 2. Special Hazards arising from the Substance or Mixture

*Special hazards:*

*In case of fire: hazardous gases/vapors may be released.*

*Combustible material.*

*Dust can form explosive mixtures with air.*

### 5. 3. Advice for Firefighters

*Protective equipment:*

*Wear self-contained respiratory protective device and full protective gear.*

*Further information:*

*Do not inhale dangerous gases formed in case of fire.*

*Contaminated extinguishing water and debris should be disposed of according to local regulations.*

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## 6. Accidental Release Measures

### 6. 1. Personal Precautions, Protective Equipment and Emergency Procedures

*Personal precautions:*

*Wear protective clothing.*

*Evacuate the danger area, observe emergency procedures, consult an expert.*

### 6. 2. Environmental Precautions

*Environmental precautions:*

*Prevent contamination of soils, drains and surface water.*

*Contact local authorities if product pollutes soil or vegetation.*

### 6. 3. Methods and Material for Containment and Cleaning Up

*Methods and material:*

*Take up mechanically and collect in suitable containers for disposal.*

*Dispose of contaminated material as waste according to section*

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### 6. 4. Reference to other Sections

*For information for safe handling see Section 7.  
Dispose of contaminated material according to Section 13.*

## 7. Handling and Storage

### 7. 1. Precautions for Safe Handling

*Instructions on safe handling:*

*Avoid contact with eyes and skin.  
Do not eat or drink during work. Do not smoke.  
Provide adequate ventilation.*

*Hygienic measures:*

*Keep away from foodstuffs and drinks.  
Remove contaminated clothing before entering dining areas.*

### 7. 2. Conditions for Safe Storage, including any Incompatibilities

*Storage conditions:*

*Store in tightly sealed containers in a dry and cool room.  
Protect product from direct sunlight.*

*Requirements for storage areas and containers:*

*Keep container tightly closed.*

*Information on fire and explosion protection:*

*Keep away from sources of heat and ignition - do not smoke.*

*Storage class:*

*10-13 (TRSG 510)*

*Further Information:*

### 7. 3. Specific End Use(s)

*Further information:*

## 8. Exposure Controls/Personal Protection

### 8. 1. Parameters to be Controlled

*Parameters to be controlled (DE):*

*none known*

*Parameters to be controlled:*

*Derived No-Effect Level (DNEL):*

*2-(1,3-Dihydro-3-oxo-2H-indol-2-yliden)-1,2-dihydro-3H-indol-3-on:  
50 mg/kg bw/d (consumer, swallowing, short-term exposition -  
systemic effects)  
500 mg/kg bw/d (consumer, swallowing, short-term exposition -  
systemic effects)  
82.5 mg/kg bw/d (consumer, skin contact, short-term exposition -  
systemic effects)  
30 mg/kg bw/d (consumer, swallowing, long-term exposition -  
systemic effects)*

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52 mg/kg bw/d (consumer, inhalation, long-term exposition - systemic effects)  
150 mg/kg bw/d (consumer, skin contact, long-term exposition - systemic effects)  
667 mg/m<sup>3</sup> (worker, inhalation, short-term exposition - systemic effects)  
123 mg/kg bw/d (worker, inhalation, short-term exposition - systemic effects)  
212 mg/m<sup>3</sup> (worker, inhalation, long-term exposition - systemic effects)  
300 mg/kg bw/d (worker, skin contact, long-term exposition - systemic effects)

*Predicted No-Effect Concentration (PNEC):*

2-(1,3-Dihydro-3-oxo-2H-indol-2-ylidene)-1,2-dihydro-3H-indol-3-one:

Fresh water: 0.1 mg/l

Sea water: 0,1 mg/l

Fresh water sediment: 0.2 mg/kg

Sewage treatment system (STP): 10 mg/l

Soil: 0.11 mg/kg

*Additional Information:*

### 8.2. Exposure Controls

*Technical protective measures:*

*Personal Protection*

*General protective measures:*

*The usual precautionary measures are to be adhered to when handling chemicals.*

*Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.*

*Respiratory protection:*

*Recommended: Particle filter P1-P3*

*Hand protection:*

*Chemical protective gloves (EN 374 (Europe), F739 (US)).*

*Protective glove material:*

*Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material and dexterity. Always seek advice from glove suppliers.*

*Eye protection:*

*Tightly fitting safety goggles (EN 166). Face-shield.*

*Body protection:*

*Protective suit with long sleeves (EN ISO 20344)*

*Environmental precautions:*

*Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume*

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*scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.*

*Do not allow entering sewerage system.*

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### 9. Physical and Chemical Properties

#### 9.1. Information on Basic Physical and Chemical Properties

<i>Form:</i>	<i>granules</i>
<i>Color:</i>	<i>blue</i>
<i>Odor:</i>	<i>odorless</i>
<i>Odor threshold:</i>	<i>not relevant</i>
<i>pH-Value:</i>	<i>not available</i>
<i>Melting temperature:</i>	<i>&gt; 200°C</i>
<i>Boiling temperature:</i>	<i>not available</i>
<i>Flash point:</i>	<i>not applicable</i>
<i>Evaporation rate:</i>	<i>This product is a non-volatile solid.</i>
<i>Flammability (solid, gas):</i>	<i>not applicable</i>
<i>Upper explosion limit:</i>	<i>no information available</i>
<i>Lower explosion limit:</i>	<i>no information available</i>
<i>Vapor pressure:</i>	<i>not applicable</i>
<i>Vapor density:</i>	<i>This product is a non-volatile solid.</i>
<i>Density:</i>	<i>1 g/cm<sup>3</sup></i>
<i>Solubility in water:</i>	<i>soluble</i>
<i>Auto-ignition temperature:</i>	<i>not applicable</i>
<i>Decomposition temperature:</i>	<i>not available</i>
<i>Viscosity, dynamic:</i>	<i>16.48 mPa.s</i>
<i>Explosive properties:</i>	<i>not applicable</i>
<i>Oxidizing properties:</i>	

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*no information available*

*Bulk density:*

### 9.2. Further Information

*Solubility in solvents:*

*Viscosity, kinematic:*

*Burning class:*

*Solvent content:*

*Solid content:*

*Particle size:*

*Other information:*

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## 10. Stability and Reactivity

### 10.1. Reactivity

*Stable if used according to specifications.*

### 10.2. Chemical Stability

*Stable if used according to specifications.*

### 10.3. Possibility of Hazardous Reactions

*Dust can form explosive mixtures with air.*

### 10.4. Conditions to Avoid

*Conditions to avoid:*

*Avoid formation of dust.*

*Avoid heat.*

*Thermal decomposition:*

### 10.5. Incompatible Materials

*No information available.*

### 10.6. Hazardous Decomposition Products

*No information available.*

### 10.7. Further Information

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## 11. Toxicological Information

### 11.1. Information on Hazard Classes as defined in Regulation (EC) No. 1272/2008

*Acute Toxicity*

*2-(1,3-Dihydro-3-oxo-2H-indol-2-ylidene)-1,2-dihydro-3H-indol-3-one:*

*LD50, oral:*

*LD50, dermal:*

*No information available.*

*LC50, inhalation:*

*No information available.*

*Primary effects*

*Irritant effect on skin:*

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*No irritant effect known.*

*Irritant effect on eyes:*

*No irritant effect known.*

*Inhalation:*

*No irritant effect known.*

*Ingestion:*

*No irritant effect known.*

*Sensitization:*

*No sensitizing effects known.*

*Mutagenicity:*

*No relevant data found.*

*Reproductive toxicity:*

*No relevant data found.*

*Carcinogenicity:*

*No relevant data found.*

*Teratogenicity:*

*No relevant data found.*

*Specific target organ toxicity (STOT):*

*Single exposure: no information available.*

*Repeated exposure: may cause damage to organs after repeated or prolonged exposure.*

*Aspiration hazard*

*Not applicable*

### 11. 2. Information on other Hazards

*Endocrine Disrupting Properties: no information available.*

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## 12. Ecological Information

### 12. 1. Aquatic Toxicity

*Fish toxicity:*

*No data available.*

*Daphnia toxicity:*

*No information available.*

*Bacteria toxicity:*

*No data available.*

*Algae toxicity:*

*No information available.*

### 12. 2. Persistency and Degradability

*No information available.*

### 12. 3. Bioaccumulation

*No information available.*

### 12. 4. Mobility

*No information available.*

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### 12.5. Results of PBT- und vPvP Assessment

*On the basis of available data, the product does not contain any PBT or vPvB substances in percentage greater than 0.1 %.*

### 12.6. Endocrine Disrupting Properties

*This substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) No. 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1 % or higher.*

### 12.7. Other Adverse Effects

*Water hazard class:*

*1 (German Regulation) (Assessment by list): slightly hazardous.*

*Behaviour in sewage systems:*

*Further ecological effects:*

*AOX Value:*

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## 13. Disposal Considerations

### 13.1. Waste Treatment Methods

*Product:*

*Reuse, when possible.*

*Dispose of product residues according to the waste disposal guidelines 2008/98/EC as well as according to official national and local regulations. Leave chemical in original containers.*

*European Waste Code (EWC):*

*Uncleaned packaging:*

*Non contaminated packaging can either be recycled or utilized for energy (incineration).*

*Waste Code No.:*

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## 14. Transport Information

### 14.1. UN Number

*ADR, IMDG, IATA*

### 14.2. UN Proper Shipping Name

*ADR/RID:*

*No hazardous goods according to ADR / DOT (US) (land transportation).*

*IMDG/IATA:*

*Not hazardous goods*

### 14.3. Transport Hazard Classes

*ADR Class:*

*not applicable*

*Hazard no.:*

*Classification code:*

*Tunnel restriction code:*

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*IMDG Class (sea):*

*not applicable*

*Hazard no.:*

*EmS No.:*

*IATA Class:*

*not applicable*

*Hazard no.:*

### 14. 4. Packaging Group

*ADR/RID:*

*not applicable*

*IMDG:*

*IATA:*

### 14. 5. Environmental Hazards

*Not classified as environmentally hazardous.*

### 14. 6. Special Precautions for User

*Not classified as a dangerous good under transport regulations.*

### 14. 7. Maritime Transport in Bulk according to IMO Instruments

*not applicable*

### 14. 8. Further Information

---

## 15. Regulatory Information

### 15. 1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

*Water hazard class:*

*1, slightly hazardous for water (according to the German Regulation AwSV)*

*Local regulations on chemical accidents:*

*Seveso III Directive: not applicable under Directive 2012/18/EC.*

*Employment restrictions:*

*Restriction and prohibition of application:*

*EC. REACH, Section XVII, Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles: not applicable*

*Technical instructions on air quality:*

### 15. 2. Chemical Safety Assessment

*A Chemical Safety Assessment is not necessary for this product.*

### 15. 3. Further Information

*EC. REACH, Annex XIV, Candidate List of Substances of very High Concern (SVHC): not regulated / not applicable  
Regulation (EU) No. 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.  
Regulation (EC) 649/2012 concerning the export and import of dangerous chemicals: Not applicable*

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## 16. Other Information

*This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.*