

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 12.06.2012

Version 8.1

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

### 1.1 Product identifier

Catalogue No.	101322
Product name	Methyl orange (C.I. 13025) indicator ACS,Reag. Ph Eur
REACH Registration Number	A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Identified uses	Reagent for analysis, Chemical production For additional information on uses please refer to the Merck Chemicals portal ( <a href="http://www.merck-chemicals.com">www.merck-chemicals.com</a> ).
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### 1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Responsible Department	EQ-RS * e-mail: <a href="mailto:prodsafe@merckgroup.com">prodsafe@merckgroup.com</a>

1.4 Emergency telephone number	Please contact the regional company representation in your country.
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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 3, Oral, H301

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification (67/548/EEC or 1999/45/EC)

T Toxic R25

For the full text of the R-phrases mentioned in this Section, see Section 16.

### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

Danger

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*Hazard statements*


H301 Toxic if swallowed.

*Precautionary statements*

P309 + P310 IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

CAS-No. 547-58-0

**Labelling (67/548/EEC or 1999/45/EC)**

Symbol(s)  T Toxic

R-phrases 25 Toxic if swallowed.

S-phrases 37-45 Wear suitable gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

EC-No. 208-925-3

**Reduced labelling (≤125 ml)**

Symbol(s)  T Toxic

R-phrases 25 Toxic if swallowed.

S-phrases 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**2.3 Other hazards**

None known.

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

Formula  $C_{14}H_{14}N_3NaO_3S$  (Hill)  
CAS-No. 547-58-0  
EC-No. 208-925-3  
Molar mass 327,34 g/mol

**Hazardous components (REGULATION (EC) No 1272/2008)**

*Chemical Name (Concentration)*

CAS-No.	EC-No. / Registration number	Index-No.	Classification
<i>methyl orange</i> (≤ 100 % )			
547-58-0	208-925-3 / *)	-	Acute toxicity, Category 3, H301

\*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Hazardous components (1999/45/EC)**

*Chemical Name (Concentration)*

CAS-No.	EC-No.	Index-No.	Classification
<i>methyl orange</i> (≤ 100 % )			
547-58-0	208-925-3	-	T, Toxic; R25

For the full text of the R-phrases mentioned in this Section, see Section 16.

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

After inhalation: fresh air.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

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

irritant effects

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

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

*Suitable extinguishing media*

Water, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

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

Combustible material

Development of hazardous combustion gases or vapours possible in the event of fire.

Fire may cause evolution of:

Sulphur oxides, nitrogen oxides, nitrous gases

### 5.3 Advice for firefighters

*Special protective equipment for firefighters*

In the event of fire, wear self-contained breathing apparatus.

*Further information*

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6. Accidental release measures

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

Advice for non-emergency personnel: Avoid substance contact. Avoid inhalation of dusts. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

### 6.2 Environmental precautions

Do not empty into drains.

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

Cover drains. Collect, bind, and pump off spills.

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Observe possible material restrictions (see sections 7 and 10).  
Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

#### 6.4 Reference to other sections

Indications about waste treatment see section 13.

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### SECTION 7. Handling and storage

#### 7.1 Precautions for safe handling

Observe label precautions.

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

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

Store at +5°C to +30°C.

#### 7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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### SECTION 8. Exposure controls/personal protection

#### 8.1 Control parameters

#### 8.2 Exposure controls

##### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

##### Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

##### *Hygiene measures*

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

##### *Eye/face protection*

Safety glasses

##### *Hand protection*

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

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The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

*Other protective equipment*  
protective clothing

*Respiratory protection*  
required when dusts are generated.  
Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances  
The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Environmental exposure controls**  
Do not empty into drains.

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## SECTION 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form	solid
Colour	orange
Odour	weak characteristic odour
Odour Threshold	No information available.
pH	ca. 6,5 at 5 g/l 20 °C
Melting point	> 300 °C
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.

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Relative density	No information available.
Water solubility	ca.5 g/l at 20 °C
Partition coefficient: n-octanol/water	log Pow: -0,66 (calculated) (Lit.) Bioaccumulation is not expected.
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified als explosive.
Oxidizing properties	none

#### 9.2 Other data

Bulk density	ca.200 - 400 kg/m <sup>3</sup>
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### SECTION 10. Stability and reactivity

#### 10.1 Reactivity

The following applies in general to flammable organic substances and preparations: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

#### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

#### 10.3 Possibility of hazardous reactions

Violent reactions possible with:

Strong oxidizing agents

Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitosamines!

#### 10.4 Conditions to avoid

no information available

#### 10.5 Incompatible materials

no information available

#### 10.6 Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### *Acute oral toxicity*

LD50 rat: 60 mg/kg (RTECS)

Symptoms: We have no description of any toxic symptoms.

absorption

#### *Eye irritation*

Possible damages: slight irritation

#### *Specific target organ toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

#### *Specific target organ toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

#### *Aspiration hazard*

Based on available data the classification criteria are not met.

### 11.2 Further information

Under given conditions, contact with nitrites or nitric acid can lead to the formation of nitrosamines, which have shown themselves to be carcinogenic in animal experiments.

Further data:

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

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## SECTION 12. Ecological information

### 12.1 Toxicity

No information available.

### 12.2 Persistence and degradability

No information available.

### 12.3 Bioaccumulative potential

*Partition coefficient: n-octanol/water*

log Pow: -0,66

(calculated)

(Lit.) Bioaccumulation is not expected.

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

### 12.6 Other adverse effects

*Additional ecological information*

Discharge into the environment must be avoided.

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## SECTION 13. Disposal considerations

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14. Transport information

### Land transport (ADR/RID)

14.1 UN number	UN 2811
14.2 Proper shipping name	TOXIC SOLID, ORGANIC, N.O.S. (METHYL ORANGE)
14.3 Class	6.1
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	C/E

### Inland waterway transport (ADN)

Not relevant

### Air transport (IATA)

14.1 UN number	UN 2811
14.2 Proper shipping name	TOXIC SOLID, ORGANIC, N.O.S. (METHYL ORANGE)
14.3 Class	6.1
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	no

### Sea transport (IMDG)

14.1 UN number	UN 2811
14.2 Proper shipping name	TOXIC SOLID, ORGANIC, N.O.S. (METHYL ORANGE)
14.3 Class	6.1
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
EmS	F-A S-A

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

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## SECTION 15. Regulatory information

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

#### *EU regulations*



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Major Accident Hazard Legislation	96/82/EC Toxic 2 Quantity 1: 50 t Quantity 2: 200 t
Occupational restrictions	Take note of Dir 94/33/EC on the protection of young people at work. Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.
<i>National legislation</i>	
Storage class	6.1C

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

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### SECTION 16. Other information

**Full text of H-Statements referred to under sections 2 and 3.**

H301	Toxic if swallowed.
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**Full text of R-phrases referred to under sections 2 and 3**

R25	Toxic if swallowed.
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#### Training advice

Provide adequate information, instruction and training for operators.

#### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

#### Regional representation

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*