

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 11.05.2011

Version 5.5

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

1.1 Product identifier

Catalogue No.	807346
Product name	Platinum(IV) oxide hydrate (80% Pt) hydrogenation catalyst for synthesis
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	Catalyst, Chemical for synthesis For additional information on uses please refer to the Merck Chemicals portal (www.merck-chemicals.com).
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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	LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number

Please contact the regional company representation in your country.

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Oxidising solid, Category 2, H272

Skin irritation, Category 2, H315

Serious eye damage, Category 1, H318

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

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

O	Oxidising	R8
Xi	Irritant	R38 - 41

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

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No. 807346
Product name Platinum(IV) oxide hydrate (80% Pt) hydrogenation catalyst for synthesis

Hazard statements

H272 May intensify fire; oxidiser.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statements

P280 Wear eye protection.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313 Get medical advice/ attention.

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word
Danger

Hazard statements
H318 Causes serious eye damage.

Precautionary statements
P280 Wear eye protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

CAS-No. 52785-06-5

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

<i>Symbol(s)</i>	O	Oxidising
	Xi	Irritant
<i>R-phrases(s)</i>	8-38-41	Contact with combustible material may cause fire. Irritating to skin. Risk of serious damage to eyes.
<i>S-phrases(s)</i>	17-26-39	Keep away from combustible material. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection.

EC-No. 215-223-0

Reduced labelling (≤125 ml)

<i>Symbol(s)</i>	O	Oxidising
	Xi	Irritant
<i>R-phrases(s)</i>	41	Risk of serious damage to eyes.
<i>S-phrases(s)</i>	26-37/39-39	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection. Wear eye/face protection.

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

Formula	PtO ₂ * xH ₂ O	O ₂ Pt * x H ₂ O (Hill)
CAS-No.	52785-06-5	
EC-No.	215-223-0	

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	807346
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Molar mass	227,08 g/mol
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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. Immediately call in ophthalmologist.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

irritant effects

Risk of serious damage to eyes.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water, Carbon dioxide (CO₂), 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

Not combustible.

Has a fire-promoting effect due to release of oxygen.

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

5.3 Advice for firefighters

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No. 807346
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Observe possible material restrictions (see sections 7.2 and 10.5).
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.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Observe label precautions.

7.2 Conditions for safe storage, including any incompatibilities

Away from combustible materials and sources of ignition and heat.

Store at +15°C to +25°C.

7.3 Specific end uses

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

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

Tightly fitting safety goggles

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).

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No. 807346
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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).

Other protective equipment

Flame retardant antistatic protective clothing

Respiratory protection

required when dusts are generated.

Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert 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.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	powder
Colour	black
Odour	odourless
Odour Threshold	No information available.
pH	No information available.
Melting point	No information available.
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.
Relative density	No information available.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	807346
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Water solubility	at 20 °C insoluble
Partition coefficient: n-octanol/water	No information available.
Autoignition temperature	No information available.
Decomposition temperature	> 100 °C
Viscosity, dynamic	No information available.
Explosive properties	No information available.
Oxidizing properties	May intensify fire; oxidiser.

9.2 Other data

none

SECTION 10. Stability and reactivity

10.1 Reactivity

See section 10.3.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with:
organic combustible substances

10.4 Conditions to avoid

Strong heating (decomposition).

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

no information available

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute inhalation toxicity

Symptoms: Possible damages:, mucosal irritations

Skin irritation

Causes skin irritation.

Eye irritation

Causes serious eye damage.

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.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	807346
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Aspiration hazard

Based on available data the classification criteria are not met.

11.2 Further information

Quantitative data on the toxicity of this product are not available.

Other information

Platinum compounds are generally highly toxic, even though the rate of absorption via the gastrointestinal tract is relatively poor. Symptoms of platinum intoxication are hepatic and renal damage, impaired hearing, and severe sensitization with allergic manifestations in predisposed persons (rhinitis, asthmatic attacks, urticaria). Platinum is not known to play a physiological role.

Further data:

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

12.1 Toxicity

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

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

Do not allow to run into surface waters, wastewater, or soil.

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

ADR/RID

UN 3085 OXIDIZING SOLID, CORROSIVE, N.O.S. (PLATINIUM-4-OXIDE), 5.1 (8), II

IATA

UN 3085 OXIDIZING SOLID, CORROSIVE, N.O.S. (PLATINIUM-4-OXIDE), 5.1 (8), II

IMDG

UN 3085 OXIDIZING SOLID, CORROSIVE, N.O.S. (PLATINIUM-4-OXIDE), 5.1 (8), II

EmS F-A S-Q

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	807346
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SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard	96/82/EC
Legislation	Oxidising 3 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.
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Storage class	5.1 B
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15.2 Chemical Safety Assessment

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

SECTION 16. Other information

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

H272	May intensify fire; oxidiser.
H315	Causes skin irritation.
H318	Causes serious eye damage.

Full text of R-phrases referred to under sections 2 and 3

R 8	Contact with combustible material may cause fire.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.

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.

Regional representation

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

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.