

## Safety Data Sheet



According to Ordinance (EC) No. 1907/2006 as per Article 31

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### SECTION 1: Description of the material or mixture and the company

#### 1.1 Product identifier

Product name: iglidur® IC-01

#### 1.2 Relevant identified use of material or mixture and uses which should be avoided

Relevant identified uses: coating material, powder

Uses which should be avoided: direct contact with foodstuff

#### 1.3 Details on supplier who provides the safety data sheet

Company:      igus® GmbH  
                    Spicher Str. 1a  
                    D-51147 Köln

Telephone:    +49 2203/9649-0  
Fax:            +49 2203/9649-222  
E-mail:        info@igus.de

#### 1.4 Emergency phone number

Emergency phone number: +49 551/19240 (poison information center North)

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### SECTION 2: Possible risks

#### 2.1 Classification of material or mixture

Classification according to ordinance (EC) No. 1272/2008

H412            Hazardous to water: chronic 3/ aquatic chronic 3; – Hazardous to water organisms with long-term effect

#### 2.2 Labelling elements

##### Hazard information

H412            Hazardous to water organisms with long-term effect

##### Safety information

P273            Prevent release into the environment

#### 2.3 Other risks

No special risks are known if regulations/notes on proper storage and handling are respected.

In case of processing the product appropriate prevention measures need to be taken. If dusts, fumes or mists occur during machining, use appropriate ventilation in order to keep the effects of air pollutants below the limit values. Dust can cause mechanical irritations.

In case of unintended release, remove mechanically in order to prevent the risk of slipping or tripping. Keep away from open fire since the product is combustible.

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The thermal decomposition products of this coating powder can cause polymer fever with flu-like symptoms in humans, especially after smoking decontaminated tobacco products.

## SECTION 3: Composition / information about components

The product is based on a thermoplastic polymer compound with additives and fillers.

### 3.1 Substances

Not applicable.

### 3.2 Mixtures

#### Hazardous ingredients

Designation	EC No.	CAS No.	Classification 1272/2008 [CLP]	Weight %.
Tetradecyl-trimethyl-ammonium bromide	214-291-9	119-97-7	Eye Dam. 1 H318 Acute Tox.4 H302 Acute Tox. 4 H332 Skin Irrit. 2 H315 STOT SE 3 H335 Aquatic Acute 1 H400 Aquatic Chronic 1 H410	0 – <0,25

#### Additional notes

Full text for H- and EUH phrases: cf. SECTION 16

## SECTION 4: First-aid measures

### 4.1 Description of first-aid measures

General information: The first-aid workers must protect themselves. Move affected persons away from the danger zone. Let them rest. Do not leave affected person unattended.

Inhalation: After inhaling decomposition products, move affected person into the fresh air and position in such a way that breathing is facilitated. Seek medical treatment if complaints occur.

Skin contact: Irritations or injuries might occur due to mechanical contact. Rinse affected skin area with a lot of water. Do not use solvents. If symptoms occur, seek medical attention. Heated coating powder or coated moulded parts can cause thermal burns which could lead to pain, redness and the formation of blisters. Immediately cool affected skin areas with cold water after contact with the molten polymer. Seek immediate medical attention. Do not peel off the cooled product from the skin.

Eye contact: irritations or injuries might occur due to mechanical contact. In the case of irritations caused by dust or combustion products rinse the affected eyes for several minutes with clean water or an eyewash solution while keeping the eyelids pulled open. Check for contact lenses and remove them if applicable. Seek medical attention if complaints persist.

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Ingestion: In case of ingestion rinse the mouth with abundant water (only if person is conscious). Seek medical advice. Do not induce vomiting. No direct rescue breaths by first-aid workers.

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

Inhalation: No special effects or risks are known.

Skin contact: No special effects or risks are known.

Eye contact: No special effects or risks are known.

Ingestion: No special effects or risks are known.

### 4.3 Information on immediate medical assistance or special treatment

Information for the medical doctor: Treat symptomatically.

Special treatment: No special treatment.

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## SECTION 5: Fire-fighting measures

The product is combustible.

### 5.1 Fire-extinguishing agents

Suitable fire-extinguishing agents: Use water spray jet, extinguishing powder, alcohol-resistant foam or carbon dioxide

Unsuitable fire-extinguishing agents: water with full jet, inert gas under high pressure

### 5.2 Special hazards due to substance or mixture

Dangerous combustion products: in case of a fire hazardous decomposition products can occur: carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen fluoride, carbonyl fluorides as well as toxic fumes, gases or particles.

Under certain fire conditions traces of other poisonous pyrolysis products cannot be ruled out.

### 5.3 Information on fire-fighting

Only enter danger zone with a breathing apparatus that is independent of the environmental air.

Wear personal protective equipment.

Cool endangered containers from a safe distance with water spray jet.

Settle evolving vapours with water.

Prevent flashbacks into the hazardous zone.

Prevent penetration of fire-fighting water into surface, ground water and soil.

Wear protective clothing and keep a safety distance to avoid skin contact.

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## SECTION 6: Measures after unintentional release

### 6.1 Personal precautions, protective equipment and measures to be taken in the case of emergencies

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Remove mechanically in order to prevent the risk of slipping or tripping. Avoid the formation of dust. Do not inhale product dusts. Keep away from open fire since product is combustible.

### 6.2 Environmental protection measures

Do not allow to penetrate into soil, surface water, drains, drain pipes or into the sewage system. Inform authorities in charge if the product has caused environmental pollution.

### 6.3 Methods and material for retention and cleaning

Remove dust-free and store dust-free. Use an approved industrial vacuum cleaner. (Vacuum cleaner type B1, suitable for removing combustible dusts of dust explosion classes St1 and St2 in zone 11). Treat the collected material according to the information in Section Disposal.

### 6.4 References to other sections

Refer to SECTION 1 emergency contact information.

Refer to SECTION 7 for handling and storage.

Refer to SECTION 8 for information regarding suitable personal protective clothing.

Refer to SECTION 13 for further information on waste treatment.

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## SECTION 7: Handling and storage

### 7.1 Protective measures for safe handling

Notes on safe handling: Provide good ventilation or extraction systems at the processing machines when processing the powder and during machining. Avoid the inhalation of dusts/mists/fumes. An accumulation of dust can lead to the risk of a dust explosion. Generally prevent the accumulation of dust. Take measures against electrostatic charging. Keep away from sources of ignition. Wear antistatic shoes and working clothes. Only use antistatic tools (spark free).

Do not inhale gases contained in the packaging.

Observe general hygiene measures for handling chemicals.

Do not heat the hardened product to temperatures above 90°C.

### 7.2 Conditions for safe storage and taking into consideration incompatibilities

Special storage conditions: Store in a cool, dry and well ventilated place. Do not store in passageways and staircases. Floors should be impenetrable, resistant to liquids and easy to clean. Keep clear from sources of ignition. The product is combustible. Do not store together with strong acids, oxidation agents, foodstuff and feedstuff. Protect from exposure to direct sunlight. Do not store at temperatures above 25°C. Keep product packaging well sealed until use. Carefully close containers again tightly after initial opening.

Storage class according to TRGS 510: (11) combustible solids.

Observe the usual measures of preventive fire-fighting.

### 7.3 Specific final applications

Recommendations: coating material, powder

Specific solutions for the industrial sector: not available

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Remarks: Do not stack container packages on top of one another without securing them.

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### SECTION 8: Limitation and monitoring of exposure/personal protective equipment

#### 8.1 Parameters to be monitored

Occupational exposure limit values:

GENERAL DUST LIMIT VALUE

Type of limit value (country of origin) : TRGS 900 ( D )

Parameter : A: alveolar fraction

Limit value : 1,25 mg/m<sup>3</sup>

Peak limit : 2(II)

Version : 17.10.2017

Type of limit value (country of origin) : TRGS 900 ( D )

Parameter : E: inhalable fraction

Grenzwert : 10 mg/m<sup>3</sup>

Peak limit : 2(II)

Version : 17.10.2017

DNEL/ PNEC: No data available.

#### 8.2 Limitation and monitoring of exposure

A good normal ventilation of the work place should be sufficient to limit workers' exposure with regard to air pollutants. During machining good ventilation or extraction systems at the processing machines are required.

##### Personal protective equipment

#### Eye/face protection

##### Suitable eye protection

Dust goggles

##### Note

Observe DGUV Regulation 112-192 (previously: BGR 192).

#### Skin protection

##### Hand protection

Suitable type of gloves : disposable gloves. Gauntlet gloves

Required properties : dust-proof.

Note : Replace lost skin oils after washing hands by lipid-containing skin ointments. Observe DGUV Regulation 112-195 (previously: BGR 195). Observe TRGS 401.

##### Body protection

Wear protective clothing. Pay attention when choosing the protective clothing: avoid contact of neck and wrist joints with the powder to prevent possible skin irritations or skin infections. Wash thoroughly after skin contact.

Recommended material : natural fibres (e.g. cotton), heat-resistant synthetic fibres.

Note : Observe DGUV Regulation 112-189, (previously: BGR 189). Observe TRGS 401.

#### Breathing protection

Breathing protection is required in case of: insufficient extraction

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### Suitable breathing apparatus

Use breathing filter P2 (particle).

The standards EN 136, 140 and 405 of the European Commission on Standardisation (CEN) provide recommendations on breathing protection masks, the standards EN 149 and 143 provide recommendations on breathing air filters.

### Note

The wearing time limits according to GefStoffV in connection with the regulations for the use of a breathing apparatus (BGR 190) need to be adhered to. Observe TRGS 402.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on the basic physical and chemical properties

Appearance:	coating powder
Colour:	cream white
Odour:	weak, product-specific
Odour threshold:	not determined
pH value:	not applicable
Melting point/freezing point:	not determined
Initial boiling point and boiling range:	not applicable, product decomposes
Flashpoint:	not applicable
Evaporation rate:	not applicable
Flammability (solid, gaseous):	not determined
Upper/lower flammability or explosion limits	not determined
Vapour pressure:	not applicable
Vapour density:	not applicable
Relative density:	not determined
Solubility(ies):	insoluble in water
Distribution coefficient: n-octanol/water:	not applicable
Self-ignition temperature:	not determined
Decomposition temperature:	as of 250°C
Viscosity:	not applicable
Explosive properties:	not applicable
Oxidizing properties:	not applicable

### 9.2 Additional information

For further technical information on the coating powder please refer to the respective material data sheet/product information sheet.

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## SECTION 10: Stability and Reactivity

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### 10.1 Reactivity

When the regulations/notes on the storage and handling are observed, this material is not deemed to have any dangerous reactions.

### 10.2 Chemical stability

The product is chemically stable during appropriate use. Do not heat the product to temperatures above [refer to point 7.1].

### 10.3 Possible hazardous reactions

During normal storage conditions and appropriate use there will be no hazardous reactions.

### 10.4 Conditions to be avoided

The thermal decomposition of the product starts as of 250°C.

### 10.5 Incompatible materials

Avoid the contact with strong acids, strong alkalis and strong oxidizing agents.

### 10.6 Dangerous decomposition products

No dangerous decomposition products are known if product is appropriately used, stored and handled and when maximum operating temperatures are adhered to (see Section 7.1). Dangerous combustion products are listed in Section 5.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute effects

##### Acute oral toxicity

Parameter : ATEmix calculated

Exposure route : oral

Efficacy : not relevant

Parameter : LD50 ( Tetradecyl-trimethyl-ammonium bromide ; CAS No. : 1119-97-7 )

Exposure route : oral

Species : rat

Efficacy : > 2500 mg/kg

##### Acute dermal toxicity

Parameter : ATEmix calculated

Exposure route : dermal

Efficacy : not relevant

##### Acute inhalative toxicity

Parameter : ATEmix calculated

Exposure route : inhalative (dust, mist)

Efficacy : not relevant

Parameter : ATEmix calculated ( Tetradecyl-trimethyl-ammonium bromide ; CAS No. : 1119-97-7 )

Exposure route : inhalation

Efficacy : 88 mg/l

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During processing a good ventilation or extraction systems at the processing machines are required.  
Thermal decomposition products of fluorinated polymers can cause polymer fever with flu-like symptoms, especially after smoking contaminated tobacco products.

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### SECTION 12: Environmentally relevant information

#### 12.1 Toxicity

##### Aquatic toxicity

##### Acute (short-term) fish toxicity

Parameter : LC50 ( Tetradecyl-trimethyl-ammonium bromide ; CAS No. : 1119-97-7 )

Effectivity : 1,81 mg/l

Exposure period : 96 h

##### Acute (short-term) daphnia toxicity

Parameter : EC50 ( Tetradecyl-trimethyl-ammonium bromide ; CAS No. : 1119-97-7 )

Effectivity : 0,022 mg/l

Exposure period : 48 h

##### Acute (short-term) algae toxicity

Parameter : IC50 ( Tetradecyl-trimethyl-ammonium bromide ; CAS No. : 1119-97-7 )

Effectivity : 0,0054 mg/l

Exposure period : 72 h

#### 12.2 Persistence and degradation

Conclusion / Summary: not/poorly degradable

#### 12.3 Bioaccumulation potential

No bio-availability

#### 12.4 Mobility in the soil

Distribution coefficient soil/water (Koc): not applicable

Mobility: not applicable

#### 12.5 Results of PBT and vPvB assessment

PBT: not applicable

vPvB: not applicable

#### 12.6 Other detrimental effects

No special effects or dangers are known. However, do not allow to penetrate into the environment, ground waters, surface waters or the sewage system.

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### SECTION 13: Disposal information

#### 13.1 Procedures of waste disposal



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The product can be incinerated in an approved plant in compliance with technical guidelines or stored together with domestic waste in an appropriate landfill site. Hydrogen fluoride must be removed by flue gas scrubbing.

Waste name: Fluorine-containing coating powder waste.

EC waste key no.: EWC – Code 08 02 01.

Contaminated packaging: Packaging that cannot be cleaned has to be disposed of in the same way as the product itself.

General: Prevent the release into the environment. Dispose of in compliance with regional respectively national safety instructions.

### 13.2 Additional information

Note chapters 7 and 8.

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## SECTION 14: Transport information

Not deemed to be hazardous goods according to the transport regulations

### 14.1 UN number

Not applicable

### 14.2 Appropriate UN shipping name

Not applicable

### 14.3 Transport hazard class

Not applicable

### 14.4 Packaging group

Not applicable

### 14.5 Environmental risks

None known

### 14.6 Special precautions for the user

None known

### 14.7 Bulk transport according to Annex II of the MARPOL – Convention and according to the IBC Code

Not applicable

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## SECTION 15: Legal regulations

### 15.1 Regulations on safety, health and the protection of the environment/ specific legal regulations for the product or mixture

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### EU regulations.

#### Other EU regulations

#### Notes on restrictions of occupation

Observe restrictions of occupation according to the law for the protection of young workers (94/33/EC).

Observe restrictions of occupation according to the law for the maternity protection for pregnant women or breastfeeding mothers (92/85/EWG).

### National regulations

#### Technical regulation air (TA-Luft)

Weight proportion (number 5.2.5. I) : < 0,5 %

#### Water hazard class (WGK)

Class : 2 (clearly hazardous to water) Classification according to AwSV

#### Other rules, limitations and prohibition directives

Observe TRGS 001. Observe TRGS 400.

### 15.2 Chemical safety assessment

No chemical safety assessment was performed.

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## SECTION 16: Other information

### 16.1 Information on changes

02. Classification of the material or mixture · 02. Special regulations for supplementary labelling elements for certain mixtures · 15. Water hazard class (WGK)

### 16.2 Abbreviations and acronyms

TRGS: Technische Regel für Gefahrstoffe [Technical regulation for hazardous substances]. BGR(I): Berufsgenossenschaftliche Regel [Regulation for occupational health and safety] (Information). DGUV: Deutsche Gesetzliche Unfallversicherung [German Social Accident Insurance]. AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen [Ordinance on Installations for the Handling of Substances Hazardous to Water].

VCI: Verband der Chemischen Industrie [Association of the Chemical Industry].

EWC: Europäischer Abfallkatalog [European Waste Catalogue].

### 16.3 Important literature and sources of data

None

### 16.4 Classification of mixtures and assessment method used according to directive (EC) No. 1272/2008 [CLP]

Supplier information

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### 16.5 Full text of H and EUH phrases (number and full text)

H302 Detrimental to health when ingested.

H315 Causes skin irritations.

H318 Causes severe eye damage.

H332 Detrimental to health when inhaled.

H335 Can irritate the respiratory tracts.

H400: Very poisonous for water organisms.

H410: Very poisonous for water organisms, with a long-term effect.

### 16.6 Training instructions

None

### 16.7 Additional information

None

The information provided above in this Safety Data Sheet is based on the current state of our knowledge and experience and describes the product with regard to safety requirements. The information does not provide any analysis certificate or technical data sheet respectively a description of the quality of the goods. A quality agreement or the suitability of the product for a concrete intended use purpose may not be derived from the intended use listed in the safety data sheet. The receiver of our product is responsible for compliance with existing laws and regulations and possible property rights.

This document is not subject to a change service.

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This is to certify that the above translation from German into English is complete and correct.

Sabine Bartsch  
Königswinter,  
17.4.2019

Certified translator for the Higher Regional Court of Cologne/Germany