

SURA Instruments GmbH
07745 Jena

Date printed 01.08.2014, Revision 01.08.2014

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SECTION 1: Identification of the substance / preparation and of the company

1.1 Product identifier

Pyrosil coating - Pyrosil refill

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

1.2.1 Relevant uses

Coating agent

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

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Safety Data Sheet

sdb@chemiebuero.de

1.4 Emergency phone

Advisory body

+49 (0)89-19240 (24h) (english)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

Aerosol 1: H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated.

2.1.2 Classification according to Directive 67/548/EEC or 1999/45/EC

F+, Extremely flammable - R 12: Extremely flammable.

2.2 Label elements

The product is classified and required to be labelled in accordance with EC-Directives

Labelling according to Regulation (EC) 1272/2008

Hazard pictograms



Signal word

DANGER

Hazard statements

H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.
P260 Do not breathe spray.
P271 Use only outdoors or in a well-ventilated area.

2.3 Other hazards

Physico-chemical hazards

Risk of bursting.

Human health dangers

Frequent persistent contact with the skin can cause skin irritation.

Environmental hazards

Does not contain any PBT or vPvB substances.

Other hazards

Further hazards were not determined with the current level of knowledge.

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SECTION 3: Composition / Information on ingredients

Product-type:

The product is a mixture.

Range [%]	Substance
50 - < 80	Butane
	CAS: 106-97-8, EINECS/ELINCS: 203-448-7, EU-INDEX: 601-004-00-0, ECB-Nr.: 01-2119474691-32-XXXX
	GHS/CLP: Flam. Gas 1: H220 - Press. Gas (*): H280
	EEC: F+, R 12
20 - < 50	Propane
	CAS: 74-98-6, EINECS/ELINCS: 200-827-9, EU-INDEX: 601-003-00-5, ECB-Nr.: 01-2119486944-21-XXXX
	GHS/CLP: Flam. Gas 1: H220 - Press. Gas (*): H280
	EEC: F+, R 12

Comment on component parts

Substances of Very High Concern - SVHC: substances are not contained or are below 0,1%.
For full text of H-statements and R-phrases: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Take off contaminated clothing and wash before reuse.

Inhalation

Ensure supply of fresh air.
In the event of symptoms seek for medical treatment.

Skin contact

In case of frostbite, rinse with plenty of water. Do not remove clothing.
Consult a doctor if skin irritation persists.

Eye contact

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

Ingestion

Seek medical advice immediately.
Rinse out mouth and give plenty of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Vertigo
Drowsiness

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide.
Water spray jet.
Dry powder.
Foam.

Extinguishing media that must not be used

Full water jet.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Bursting aerosols can be forcibly projected from a fire.

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from all sources of ignition.
Ensure adequate ventilation.
Use personal protective equipment.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Take up residues with absorbent material (e.g. sand).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Provide suitable vacuuming at the processing area.
Keep away from all sources of ignition - Refrain from smoking.
Vapours can form an explosive mixture with air.
Do not eat, drink, smoke or take drugs at work.
Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Do not store together with oxidizing agents.
Do not store together with food and animal food/diet.
Keep container in a well-ventilated place.
Protect from heat/overheating.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Range [%]	Substance
50 - < 80	Butane
	CAS: 106-97-8, EINECS/ELINCS: 203-448-7, EU-INDEX: 601-004-00-0, ECB-Nr.: 01-2119474691-32-XXXX
	Long-term exposure: 600 ppm, 1450 mg/m ³
	Short-term exposure (15-minute): 750 ppm, 1810 mg/m ³

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8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	Safety glasses.
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. butyl rubber, > 120 min (EN 374)
Skin protection	Light protective clothing.
Other	Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of these equipments to chemicals should be ascertained with the respective supplier.
Respiratory protection	Breathing apparatus in the event of high concentrations. Short term: filter apparatus, filter A.
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	See SECTION 6+7.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	aerosol
Color	colourless
Odor	characteristic
Odour threshold	not required
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not applicable
Flash point [°C]	not applicable
Flammability [°C]	yes
Lower explosion limit	~ 1,8 Vol.%
Upper explosion limit	~ 8,8 Vol.%
Oxidizing properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/ml]	0,56 (20 °C / 68,0 °F)
Bulk density [kg/m³]	not applicable
Solubility in water	not applicable
Partition coefficient [n-octanol/water]	not determined
Viscosity	not applicable
Relative vapour density determined in air	not applicable
Evaporation speed	not applicable
Melting point [°C]	not applicable
Autoignition temperature [°C]	not applicable
Decomposition temperature [°C]	not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

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10.3 Possibility of hazardous reactions

Because of the high vapour pressure, containers are liable to burst if temperature rises.
Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

not determined

10.6 Hazardous decomposition products

Flammable gases/vapours.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Range [%]	Substance
20 - < 50	Propane, CAS: 74-98-6 LC50, inhalative, Rat: > 1443 mg/l (15 min) (Lit.).
50 - < 80	Butane, CAS: 106-97-8 LC50, inhalative, Rat: 658 mg/l (4 h) (Lit.).

Serious eye damage/irritation	not determined
Skin corrosion/irritation	not determined
Respiratory or skin sensitisation	not determined
Specific target organ toxicity — single exposure	not determined
Specific target organ toxicity — repeated exposure	not determined
Mutagenicity	not determined
Reproduction toxicity	not determined
Carcinogenicity	not determined
General remarks	

Toxicological data of complete product are not available.
No classification on the basis of the calculation procedure of the preparation directive.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 12: Ecological information

12.1 Toxicity

12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

12.3 Bioaccumulative potential

Accumulation in organisms is not expected.

12.4 Mobility in soil

not applicable

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12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

None known.

No classification on the basis of the calculation procedure of the preparation directive.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.

Waste no. (recommended)

160504* gases in pressure containers (including halons) containing dangerous substances

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

Waste no. (recommended)

150110*

SECTION 14: Transport information

14.1 UN number

See SECTION 14.2 in accordance with UN shipping name

14.2 UN proper shipping name

Transport by land according to ADR/RID UN 1950 AEROSOLS 2.1

- Classification Code

5F

- Label



- ADR LQ

1 I

- ADR 1.1.3.6 (8.6)

Transport category (tunnel restriction code) 2 (D)

Inland navigation (ADN)

UN 1950 AEROSOLS 2.1

- Classification Code

5F

- Label



Marine transport in accordance with IMDG UN 1950 Aerosols 2.1 -

- EMS

F-D, S-U

- Label



- IMDG LQ

1 I

Air transport in accordance with IATA UN 1950 Aerosols, flammable 2.1

- Label



14.3 Transport hazard class(es)

See SECTION 14.2 in accordance with UN shipping name

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14.4 Packing group

See SECTION 14.2 in accordance with UN shipping name

14.5 Environmental hazards

See SECTION 14.2 in accordance with UN shipping name

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not determined

SECTION 15: Regulatory information

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

EEC-REGULATIONS	1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC
TRANSPORT-REGULATIONS	DOT-Classification, ADR (2013); IMDG-Code (2013, 36. Amdt.); IATA-DGR (2013).
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (1999/13/CE)	100%

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 R-phrases (SECTION 3)

R 12: Extremely flammable.

16.2 Hazard statements (SECTION 3)

H280 Contains gas under pressure; may explode if heated.
H220 Extremely flammable gas.

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16.3 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
 RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
 ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging
 DMEL = Derived Minimum Effect Level
 DNEL = Derived No Effect Level
 EC50 = Median effective concentration
 ECB = European Chemicals Bureau
 EEC = European Economic Community
 EINECS = European Inventory of Existing Commercial Chemical Substances
 ELINCS = European List of Notified Chemical Substances
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
 IC50 = Inhibition concentration, 50%
 IMDG = International Maritime Code for Dangerous Goods
 IUCLID = International Uniform Chemical Information Database
 LC50 = Lethal concentration, 50%
 LD50 = Median lethal dose
 MARPOL = International Convention for the Prevention of Marine Pollution from Ships
 PBT = Persistent, Bioaccumulative and Toxic substance
 PNEC = Predicted No-Effect Concentration
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
 TLV@TWA = Threshold limit value – time-weighted average
 TLV@STEL = Threshold limit value – short-time exposure limit
 VOC = Volatile Organic Compounds
 vPvB = very Persistent and very Bioaccumulative

16.4 Other information**Classification procedure**

Aerosol 1: H222 Extremely flammable aerosol. (Bridging principle "Aerosols") H229
 Pressurised container: May burst if heated. (Calculation method)

Modified position

SECTION 2 been added: P271 Use only outdoors or in a well-ventilated area.
 SECTION 2 been added: P260 Do not breathe spray.
 SECTION 2 been added: P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.
 SECTION 2 been added: P251 Do not pierce or burn, even after use.
 SECTION 2 been added: P211 Do not spray on an open flame or other ignition source.
 SECTION 2 been added: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 SECTION 4 been added: Take off contaminated clothing and wash before reuse.
 SECTION 4 deleted: Change soaked clothing.
 SECTION 5 been added: Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.
 SECTION 7 been added: Do not store together with food and animal food/diet.
 SECTION 12 been added: Accumulation in organisms is not expected.



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