



SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product Name: G105 3D Printing Filament

Product Description: used primarily for extrusion-based 3D printing processes

Part Number(s): 2610056410

Model Number(s): 2615PG12AA

Date of issue/Revision Date: 03/31/2017

Manufacturer/Distributor:

Robert Bosch Tool Corporation
1800 W. Central Road
Mt. Prospect, IL 60056

For More Information, Call:

(Monday-Friday, 8:00 AM– 5:00 PM CST)
Bosch Customer Service
(877) 267-2499

In Case of Emergency, Call:

(24 Hours/Day, 7 Days/Week)
(877) 303-0891

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Classification according to Directive 67/548/EEC or 1999/45/EC as amended

This substance does not meet the criteria for classification according to Directive 67/548/EEC as amended.

2.1.2 Classification according to Regulation (EC) No 1272/2008 as amended

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

2.2 Label elements Not applicable.

2.3 Other hazards Not likely to be an irritant in the solid form. Danger of burns when heated/molten material is handled.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %	Exposure Limits
1,4-Benzenedicarboxylic acid, 1,4-dimethyl ester, polymer	25038-91-9	>90%	None



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SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

4.1.1 Inhalation: Move to fresh air. Call a physician immediately if irritation persists.

4.1.2 Skin contact: Remove contaminated clothing and shoes. Get medical attention if skin symptoms occurred. If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see a physician for removal of adhering material and treatment of burn. Wash contaminated clothing and shoes before reuse.

4.1.3 Eye contact: Get medical attention if eye symptoms occurred. In case of contact with molten substance, immediately flush eyes with water for at least 15 minutes. Get medical attention immediately.

4.1.4 Ingestion: Get medical attention if swallowed amount of substance

4.2 Most important symptoms and effects, both acute and delayed

Burns resulted from contacting or handling heated/molten materials

4.3 Indication of any immediate medical attention and special treatment needed

Call emergency medical service. Get medical advice/attention if you needed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. If burned by contact with molten material, cool quickly as possible with water, and then go to see a physician for treatment of burn.

SECTION 5: FIREFIGHTING MEASURES

5.1 Suitable extinguishing media

Suitable extinguishing media: CO₂, water, sand

5.2 Special hazards arising from the substance or mixture

Thermal decomposition products: Not available. Hazardous combustion products: CO₂, CO. Unusual fire and explosion hazards: No explosion hazard

5.3 Advice for fire fighters

Wear positive pressure self-contained breathing apparatus (SCBA). - Structural fire fighters' protective clothing will only provide limited protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Stop leak if you can do it without risk. Isolate exposed area. Keep unauthorized personnel away. Use certificated protective equipment. Ventilate the leaked area.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

6.3 Methods and materials for containment and cleaning up

Do not touch or walk through spilled material. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with molten material. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures.



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7.2 Conditions for safe storage

Keep container closed. Store container in a well dry/cool place. Keep away from waterways and sewers. Keep away from any source of ignition.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits

Specific exposure limits have not been established or are not applicable unless listed below. Regulation in Korean: Not applicable **US (NIOSH/OSHA AGGIH):**

- NIOSH- TWA: Not applicable
- OSHA- TWA: Not applicable
- ACGIH- TWA: Not applicable

EU Regulation: Not applicable

Biological Exposure Index: Not applicable

Biological limit values: No biological exposure limits noted for the ingredient(s)

Recommended monitoring procedures: Not available

Derived no-effect level (DNEL): Not available

Predicted no effect concentrations (PNECs): Not available

8.2 Engineering controls

Provide local exhaust ventilation system or other engineering controls to keep the airborne below their respective threshold limit value. Check legal suitability of exposure level.

8.3 Personal protective equipment

Respiratory Protection: Wear NIOSH or European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment when necessary.

Eye Protection: An eye wash unit and safety shower station should be available nearby work place. Wear safety glasses to protect eyes from scattering toxic substance.

Skin Protection: It is a good industrial hygiene practice to minimize skin contact. When material is heated, wear gloves to protect against thermal burns.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Filament, Solid

Color: Yellow/Grey

Odor: Slight odor

Odor threshold: Not available

pH: Not applicable

Melting point/freezing point: Not applicable

Boiling point: Not applicable

Flash point: Not applicable

Evaporation rate: Not applicable

Flammability: Not available



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Upper/lower flammability or explosive limits: Not available

Vapor pressure: Negligible (20 °C)

Vapor density: Not applicable

Relative density: 1.25 g/ml (25 °C)

Solubility: Not available

Partition coefficient (n-octanol/water): No data available

Auto-ignition temperature: 454 °C

Decomposition temperature: Onset of decomposition > 350 °C

Viscosity: Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable at normal conditions.

10.2 Chemical stability

Material is stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Avoid extreme heat. Avoid all sources of ignition: heat, sparks, open flames, etc.

10.5 Incompatible materials

Not available

10.6 Hazardous decomposition products

Carbon oxides

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Likely routes of exposure

Inhalation: Dust irritates the respiratory system, and may cause coughing and difficulties in breathing.

Skin contact: Molten material will produce thermal burns.

Eye contact: Molten material will produce thermal burns.

Ingestion: May cause discomfort if swallowed.

11.2 Symptoms

Dust may irritate throat and respiratory system and cause coughing. Direct contact with eyes may cause temporary irritation.

11.3 Information on toxicological effects Acute toxicity: Not available.

Skin corrosion/irritation: Molten material will produce thermal burns.

Serious eye damage/eye irritation: Molten material will produce thermal burns.

Respiratory sensitization: Not available.



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Skin sensitization: Not available.

Germ cell mutagenicity: Not available.

Carcinogenicity: IARC, NTP, OSHA, ACGIH, EU Regulation 1272/2008, US EPA: not listed.

Reproductive toxicity: Not available

Specific target organ toxicity - single exposure: Not available

Specific target organ toxicity - repeated exposure: Not available

Aspiration hazard: Not available

Mixture versus substance information: Not applicable.

Other information: Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2 Persistence and degradability No data available.

12.3 Bioaccumulative potential No data available.

12.4 Mobility in soil

Not available

12.5 Other adverse effects

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

In accordance with local and national regulations. Do not contaminate ponds, waterways or ditches with chemical or used container. Contact manufacturer if needed.

SECTION 14: TRANSPORT INFORMATION

ADR: Not regulated as dangerous goods.

RID: Not regulated as dangerous goods.

ADN: Not regulated as dangerous goods.

IATA: Not regulated as dangerous goods.

IMDG Not regulated as dangerous goods.

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

This substance/mixture is not intended to be transported in bulk.

SECTION 15: REGULATORY INFORMATION

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

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I
Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II
Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended
Not listed.



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Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorizations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not listed.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Not listed.

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work Not listed.

Directive 94/33/EC on the protection of young people at work Not listed.

Other regulations

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations: Not available.



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15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: OTHER INFORMATION

Although Robert Bosch Tool Corporation has attempted to provide current and accurate information herein, Robert Bosch Tool Corporation makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage, injury of any kind, which may result from or arise out of the use of or reliance on the information by any person.

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