

Material Name: zp[®] 151 Powder

I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product/Trade Name: zp[®] 151 Powder

Chemical Family: Powder Mixture

Product Use: For use with ZPrinter[®] 3D inkjet printer

Hazardous Materials Identification System (HMIS):

(Degree of hazard: 0 = low, 4 = extreme):

Health **0**
 Flammability **0**
 Physical Hazards **0**

Personal Protection:

Dust mask, skin, eye protection

Manufacturer:



| | In the U.S./Canada |
|----------------------|----------------------------------------------------------|
| Manufacturer Contact | 333 Three D Systems Circle Rock Hill SC, 29730 U.S.A. |
| For Information | Phone: 803.326.3900 or Toll-free Phone: 800.793.3669 |
| Emergency | 800.424.9300 - Chemtrec |

II. COMPOSITION INFORMATION

Component Information

Powder mixture.

| Chemical name | CAS-No | % |
|-----------------------------|------------|-------|
| Calcium sulfate hemihydrate | 10034-76-4 | 80-90 |

III. HAZARDS IDENTIFICATION

Emergency Overview

This product is not considered to be hazardous according to 29CFR 1910.1200 (Hazard Communication Standard).

IV. FIRST AID MEASURES

Eyes: Rinse with plenty of water
 Inhalation: Move affected person to fresh air. If respiratory irritation occurs, seek medical attention immediately.
 Skin contact: Flush skin with plenty of soap and water.
 Ingestion: If ingested, drink plenty of water. Do not induce vomiting.

V. FIRE FIGHTING MEASURES

Flash Point: >360 °F (183 °C)

Upper Flammable Limit (UFL): NA

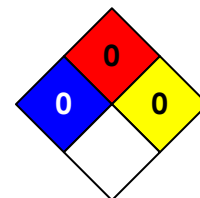
Auto Ignition: NA

Rate of Burning: NA

Method Used: NA

Lower Flammable Limit (LFL): NA

Flammability Classification: NA



NFPA Ratings
 0 = Minimal
 1 = Slight
 2 = Moderate
 3 = Serious
 4 = Severe

General Fire Hazards: Thermal decomposition products can include sulphur oxides, calcium oxide, CO₂ and CO.
 Extinguishing Media: Use water mist, dry chemical, carbon dioxide, or chemical foam.

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VI. ACCIDENTAL RELEASE MEASURES

Clean-Up Procedures: Sweep up. Place all waste in an appropriate container for disposal.
 Personal precautions: Avoid dust formation. Do not breathe vapors/mist/gas.
 Environmental precautions: Avoid discharge to sewer system.

VII. HANDLING AND STORAGE

Handling: Provide adequate ventilation during dust formation.
 Storage: Store sealed in the original container at room temperature. Keep this material in a cool, dry, well-ventilated place.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

General Product Information: No occupational exposure limits (PEL/TWA) have been established for this product.
 Component Analysis:

| Component | Component Manufacturer IEL (Internal Exposure Limit) |
|------------------------------|---------------------------------------------------------|
| Calcium sulphate hemihydrate | 6mg/m3 |

Technical measures to prevent exposure: Use local exhaust ventilation.
 Instructional measures to prevent exposure: When using, do not eat, drink or smoke. Wash hands after handling and before eating, smoking and using the lavatory and at the end of the day.

Personal protection equipment:
 Hand protection: Use impervious nitrile gloves.
 Eye protection: Wear safety glasses or chemical goggles.
 Body protection: Use apron and closed shoes.

IX. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|-------------------------------------|--------------|------------------------------|-----------|
| Appearance | White powder | Odor | Mild |
| Physical State | Powder | PH | NA |
| Vapor Pressure | NA | Vapor Density | NA |
| Boiling Point | NA | Melting/Freezing Point | 1450 °C |
| Solubility (H ₂ O) | 0.83% (3 °C) | Specific Gravity | 2.6 - 2.7 |
| Percent Volatile | <1% | Molecular Weight | NA |

X. CHEMICAL STABILITY AND REACTIVITY

Conditions to avoid: Avoid wet/humid environment. Avoid dust formation.
 Materials to avoid: Oxidizing materials, acids, strong bases, water, high humidity.
 Hazardous decomposition products: Sulphur oxides, calcium oxide, carbon dioxide and carbon monoxide can be released at high temperatures or upon burning.

XI. TOXICOLOGICAL INFORMATION

Toxicokinetics, metabolism and distribution: NA

Acute effects (toxicity tests)

| Component | LD50 Oral | LD50 Dermal |
|------------------------------|--------------------|-------------|
| Calcium sulphate hemihydrate | > 5000mg/kg (rats) | NA |

General remarks:

Carcinogenicity: None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

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XII. ECOLOGICAL INFORMATION

Ecotoxicity: The aquatic toxicity of the product is unknown. No data are available for the components of this product.
 Mobility: No information available for product.
 Persistence and degradability: No information available for product.
 Results of PBT assessment: No information available for product
 Other adverse effects: No information available for product

XIII. DISPOSAL CONSIDERATIONS

US EPA Waste Number & Descriptions

A: General Product Information: No EPA Waste Numbers are applicable for this product. This product is not defined or designated as hazardous by current provisions of RCRA – 40CFR261.

Disposal Instructions: Avoid disposal. If possible, completely utilize product. Dispose of unused product in accordance with applicable Federal, State, Provincial, or Local regulations.

XIV. TRANSPORT INFORMATION

| | US DOT | RID/ADR | IMDG | IATA | IMO | Canada TDG |
|----------------|---------------|---------|------|------|-----|------------|
| Shipping Name | Not Regulated | | | | | |
| Hazard Class: | | | | | | |
| UN Number: | | | | | | |
| Packing Group: | | | | | | |

XV. REGULATORY INFORMATION

US FEDERAL

TSCA:.....All materials are listed on the TSCA Inventory
 SARA 302 EHS List (40 CFR 355 Appendix A):.....Not listed
 SARA 313 (40 CFR 372.65):.....Not listed
 CERCLA (40 CFR 302.4):.....Not listed

XVI. ADDITIONAL INFORMATION

MSDS Creation Date:..... January 17, 2013
 MSDS Revision #: 00-A
 MSDS Revision Date:..... NA
 Reason for Revision:..... NA
 For more information:..... www.3dsystems.com
 800.793.3669 (Toll-free in the US GMT-07:00; N. America, Mon – Fri, 6:00 a.m. to 6 p.m.)
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Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists

CAS = Chemical Abstracts Service

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

CFR = Code of Federal Regulations

CPR = Controlled Products Regulations

DOT = Department of Transportation

DSL = Domestic Substances List

EINECS = European Inventory of Existing Commercial Chemical Substances

EPA = Environmental Protection Agency

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IDL = Ingredients Disclosure List

mg/Kg = milligrams per Kilogram

mg/L = milligrams per Liter

mg/m³ = milligrams per Cubic Meter

MSHA = Mine Safety and Health Administration

NA = Not Applicable or Not Available

NIOSH = National Institute for Occupational Safety and Health

NJTSR = New Jersey Trade Secret Registry

NTP = National Toxicology Program

OSHA = Occupational Safety and Health Administration

SARA = Superfund Amendments and Reauthorization Act

STEL = Short Term Exposure Limit

TDG = Transport Dangerous Goods

TSCA = Toxic Substances Control Act

WHMIS = Workplace Hazardous Materials Information System.