



SAFETY DATA SHEET

1. Identification

Product identifier V1R28Series
Other means of identification
Synonyms HR PP Powder
Recommended use Materials to be processed in HP 3D MJF equipment only.
Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

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Mississauga, Ontario, Canada L4W 5G1

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or 1-888-447-4636

HP Inc. health effects line

(Toll-free within the US) 1-800-457-4209
(Direct) 1-760-710-0048

HP Inc. Customer Care Line

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(Direct) 1-208-323-2551

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Emergency Telephone Number 1-760-710-0048

Supplier Not available.

2. Hazard identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word Warning

Hazard statement May form combustible dust concentrations in air.

Precautionary statement

Prevention Take precautionary measures against static discharge. Use with adequate ventilation. Avoid generation or accumulation of dust.

Response If inhaled, remove to fresh air. Get medical attention if symptoms persist. IN CASE OF FIRE, use water spray or fog, foam, dry chemical or CO₂. Collect in a chemical waste container. Use only vacuum cleaners approved for combustible dust collection.

Storage Not available.

Disposal Not available.

Other hazards May form combustible dust concentrations in air.
Risk of skin burns caused by hot melt.

Supplemental information This material is considered hazardous under the OSHA Hazard Communication Standard criteria, based on hazard(s) not otherwise classified.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Polypropylene		Proprietary	100

Composition comments The components of this product have been evaluated in accordance with the hazard criteria of the Canada Hazardous Products Regulations (HPR).

4. First-aid measures

Inhalation	If dust from the material is inhaled, remove the affected person immediately to fresh air. Move to fresh air in case of accidental inhalation of vapors or decomposition products. If breathing is difficult, give oxygen. Oxygen or artificial respiration if needed. Consult a physician for specific advice.
Skin contact	Wash the skin immediately with soap and water. In case of contact with molten product, cool rapidly with water and seek immediate medical attention. Do not attempt to remove molten product from skin because skin will tear easily.
Eye contact	Dust: Wash well-open eyes immediately, abundantly and thoroughly with water. Remove particle remaining under the eyelids. If irritation persists, consult a doctor. On contact with hot product: Cool eyes rapidly with cold water after contact with molten polymer. Continue to rinse for at least 15 minutes. Get medical attention immediately.
Ingestion	If swallowed, do NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.
Most important symptoms/effects, acute and delayed	No experiences of acute or chronic damages in humans have been made yet.
General information	Risk of skin burn caused by hot melt. Do not leave the victim unattended. Remove victim immediately from source of exposure. Victim to lie down in the recovery position, cover and keep him warm.

5. Fire-fighting measures

Suitable extinguishing media	Water spray, foam, dry powder or carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	May be released in case of fire: carbon monoxide, carbon dioxide, nitric oxides, organic products of decomposition. Under certain fire conditions, traces of other toxic products may occur.
Special protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire fighting equipment/instructions	Do not use a solid stream of water. A solid stream of water can cause a dust explosion. Fire fighting equipment should be thoroughly decontaminated after use.
General fire hazards	Dust clouds generated during handling and/or storage can form explosive mixtures with air. Check that all equipment is properly grounded and installed to satisfy electrical classification requirements. As with any dry material, pouring this material or allowing it to free-fall or to be conveyed through chutes or pipes can accumulate and generate electrostatic sparks, potentially causing ignition of the material itself, or of any flammable materials which may come into contact with the material or its container.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	In case product dust is released: Dust mask
Methods and materials for containment and cleaning up	Sweep up or vacuum up spillage and collect in suitable container for disposal. If a vacuum is used, the motor must be rated as dust explosion-proof. Dispose of in compliance with federal, state, and local regulations.
Environmental precautions	Prevent further leakage or spillage. Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

7. Handling and storage

Precautions for safe handling	Avoid contact with skin and eyes Avoid breathing dust. Prevent dust accumulation to minimize explosion hazard. Inside and outside the equipment should be cleaned regularly with an explosion-protected vacuum cleaner to avoid dust accumulation. Do not sweep the dust or or try to remove it with a compressed-air gun. Remove contaminated clothing and wash the skin thoroughly with soap and water after work.
Conditions for safe storage, including any incompatibilities	Store away from moisture and heat to maintain the technical properties of the product. Eliminate sources of ignition. Do not expose to heat or store above 60C.

8. Exposure controls/personal protection

Occupational exposure limits

ACGIH

Components

Type

Value

Polypropylene

TWA

3 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

HP recommends the use of HP accessories for unpacking 3D parts and refilling the build chamber. If other methods are used, read the following: Dust clouds generated during handling and/or storage can form explosive mixtures with air. Dust explosion characteristics vary with the particle size, particle shape, moisture content, contaminants, and other variables. Check that all equipment is properly grounded and installed to satisfy electrical classification requirements. As with any dry material, pouring this material or allowing it to fall freely or be conveyed through chutes or pipes can accumulate and generate electrostatic sparks, potentially causing ignition of the material itself, or of any flammable materials which may come into contact with the material or its container.

Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Consult ACGIH ventilation manual, NFPA Standard 91 and NFPA Standard 654 for design of exhaust system and safe handling.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields.

Skin protection

Hand protection

Wear impermeable gloves. Protective heat-insulating gloves are to be used during thermal processing. Any areas of skin covered with dust must be washed immediately with soap and water as the powder draws out natural moisture from the skin. Use barrier cream regularly.

Other

Processing of this product releases vapors or fumes which may cause skin irritation. It is a good industrial hygiene practice to minimize skin contact. Wash thoroughly after handling.

Respiratory protection

Avoid breathing dust. Avoid breathing processing fumes or vapors. Where airborne exposure is likely or airborne exposure limits are exceeded, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components and substances released during processing.

Thermal hazards

In thermal processing: Risk of skin burns. Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Powder.

Solid.

Physical state

Not available.

Form

Powder.

Color

White.

Odor

Not available.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

248 - 338 °F (120 - 170 °C)

Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Solubility(ies)	
Solubility (water)	Not soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	> 716 °F (> 380 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	330 kg/m3 Approximately
Explosive properties	Dusts might form explosive mixtures with air. Powder explosivity data: Minimum Ignition Energy (MIE) "dust cloud" w/ Inductance >30mJ. Layer Ignition Temperature (LIT) "dust layer" >400degC. Minimum Ignition Temperature (MIT) "dust cloud" >360degC. Auto Ignition Temperature (AIT) >400degC.
Flammability (flash back)	This product is not flammable.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	Under normal conditions: stable.
Chemical stability	The product is stable under normal handling and storage conditions.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	Take measures to mitigate material spillage and avoid potential ignition sources such as ESD (ElectroStatic Discharges), flames, and sparks. Do not smoke nearby. Avoid wet/humid environment. Recommended working humidity 50-70%. Avoid dust formation.
Incompatible materials	Oxidizing materials, acids, strong bases, water and high humidity.
Hazardous decomposition products	Decomposition products on thermal decomposition, carbon monoxide, carbon dioxide, Nitrogen oxides (NOx), organic products of decomposition.

11. Toxicological information

Information on likely routes of exposure

Inhalation	At high temperature, products of thermal decomposition can be irritating to respiratory system.
Skin contact	May be considered as comparable to a similar product for which experimental results are: Non irritating to skin.
Eye contact	May be considered as comparable to a similar product for which experimental results are: Not irritating to the eyes.
Ingestion	May be considered as comparable to a similar product for which experimental results are: Slightly harmful by ingestion.

Symptoms related to the physical, chemical and toxicological characteristics Not available.

Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Respiratory sensitization Based on available data, the classification criteria are not met.

Skin sensitization Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

IARC Monographs. Overall Evaluation of Carcinogenicity

Polypropylene (CAS Proprietary) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

Further information Complete toxicity data are not available for this specific formulation

12. Ecological information

Ecotoxicity No ecotoxicity data noted for the ingredient(s).

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Waste from residues / unused products Not available.

Contaminated packaging Not available.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

ADR
Not regulated as dangerous goods.

Further information Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

15. Regulatory information

Canadian regulations

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

16. Other information**Issue date**

24-Apr-2020

Version #

01

Other information

This SDS was prepared in accordance with Canada Controlled Product Regulations.

Disclaimer

This Safety Data Sheet document is provided without charge to customers of HP. Data is the most current known to HP at the time of preparation of this document and is believed to be accurate. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application. This document was prepared to the requirements of the jurisdiction specified in Section 1 above and may not meet regulatory requirements in other countries.

Revision information

Product and Company Identification: Synonyms
Composition / Information on Ingredients: Ingredients
Exposure Controls / Personal Protection: OELs
Physical & Chemical Properties: Multiple Properties
HazReg Data: Pacific Rim

Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds