

DOMO Engineering Plastics US
Safety Data Sheet
Ecomass Compounds 3600TU and ZD Series

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification

1(a) Product Identifier used on label

Ecomass Compounds: 3600TU and ZD Series
Form: Plastic Compound (Polyethylene, HDPE & LDPE) & Metallic Powder Mixture (Pellets)

1(b) Other means of identification

None

1(c) Recommended use of the chemical and restrictions on use

1. Uses: Thermoplastic Resin for Injection Molding and Extrusion
2. Restrictions on Uses: None

1(d) Name, address, & telephone number of the chemical manufacturer, importer, or supplier

DOMO Engineering Plastics US
4917 Golden Parkway, Suite 300
Buford, GA 30518
770-237-2311

1(e) Emergency phone number

770-237-2311

SECTION 2: Hazard(s) Identification

2(a) Hazard Classification

(GHS-US): Not classified as a hazardous substance or mixture.

2(b) Label Elements

Signal Word: None
Pictogram: None
Hazard Statements: None
Supplemental Hazard Statement: Processing may release vapors and/or fumes which cause eye, skin, and respiratory tract irritation.

2(c) Hazards not otherwise classified

This material has not been evaluated as a whole. All ingredients are bound in a polymer matrix and potential for hazardous exposure as shipped is minimal. However, some fumes may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respirator program, etc.) to protect his employees from exposure which may cause eye, skin, and respiratory tract infection. Prolonged or repeated exposure may cause: headache, drowsiness, nausea, weakness (severity of effects depends on extent of exposure). (See Section 8 - Exposure Controls / Personal Protection) The following ingredients are considered hazardous per OSHA 1910.1200:

1. Metallic Powder
2. Nuisance Dust

2(d) Ingredients with unknown toxicity

None

SECTION 3: Composition / Information on Ingredients

Products as manufactured are classified as non-hazardous and chemical disclosure is not required by regulation(s).

While not required, polymers and metal powders are described below with their CAS Number(s).

If a chemical is not specifically identified, it is considered proprietary.

Each tungsten powder particle is bound in a polymer matrix mixture and potential for hazardous exposure as shipped is minimal.

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Name	Product Identifier	%	Classification (GHS-US)
Polyethylene Hexane Copolymer	(CAS No) 25213-02-9	< 100	Not classified
Tungsten	(CAS No) 7440-33-7	< 100	Not classified

SECTION 4: First Aid Measures

4(a) Description of First Aid Measures

After Inhalation: No known effects. Supply fresh air. Consult physician.

After Skin Contact: No known effects. Wash contacted skin. If contact with molten product, immediately flush with cool water. Do not pull solidified product off skin. Seek medical treatment.

After Eye Contact: No known effects. Rinse eyes with water. If contact with molten product, immediately flush with cool water. Seek medical treatment.

After Ingestion: No known effects. DO NOT induce vomiting. Seek medical treatment.

4(b) Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: No known effects. Long term skin contact could cause skin dryness.

4(c) Indication of any immediate medical attention and special treatment needed

Treat symptoms as above. No specific antidote. Consult physician and/or seek medical treatment.

SECTION 5: Fire Fighting Measures

5(a) Suitable Extinguishing Media

Water spray or mist, Carbon dioxide (CO₂), Foam, Dry Chemical. For large fires use water spray from a fogging nozzle if available and call for fire-fighting assistance.

Unsuitable Extinguishing Media

A solid water stream may scatter and spread fire.

5(b) Specific hazards arising from the substance or mixture

Fire hazard: Treat as a solid that can burn. Not flammable but will burn (although not easily ignited) and the following hazardous products of combustion can occur: carbon monoxide, other hydrocarbons, and hydrocarbon oxidation products such as ketones, aldehydes (including formaldehyde), and organic acids.

Explosion hazard: Static charge buildup can be a potential fire hazard when used in the presence of volatile, flammable vapors or in high airborne or settled dust concentrations which may result in secondary ignitions and propagations.

Reactivity: Non-reactive.

5(c) Advice for Fire Fighters

Precautions: Use standard protective clothing for fire fighters. Self contained breathing apparatus should be worn to prevent inhalation of smoke and decomposition products in the event the material should burn. Decontaminate fire fighting equipment after use.

SECTION 6: Accidental Release Measures

6(a) Personal precautions, protective equipment and emergency procedures

General measures: If spilled, may cause a fall or slipping hazard. Avoid dust generation, dust dispersion into the air by sweeping or blowing with compressed air, and deposits on surfaces as dust can form an explosive mixture. Keep away from ignition sources. Ensure proper ventilation.

Environmental: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Prevent entry to sewers and public waters.

6(b) Methods and material for containment and cleaning up

Containment: Prevent further leakage or spillage if you can do so without risk. Ventilate the area. Shovel, scoop, sweep up or use industrial vacuum cleaner and return to original container. Products are non-hazardous waste. Proper disposal should be evaluated based on local, state, and federal regulations/legislation or directives. Users must determine if a report is required to EPA for any amounts of this material disposed of or otherwise released into the environment.

References: Refer to Sections 7, 8, and 13.

SECTION 7: Handling and Storage

7(a) Precautions for Safe Handling

Prevent generation of dust and avoid breathing dust. If necessary, wear a dust mask. Avoid breathing processing fumes or vapors and use local exhaust above processing areas. Wash hands after use. Avoid eating, drinking, and smoking in work areas. Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of material from eyes, skin, and clothing. Take precautionary measures against static discharge. Earth/Ground processing equipment. Product may accumulate static charge during transport, handling, and processing. Considering the risks of electrostatic discharges, handling the products in potentially flammable atmospheres should be evaluated. Suitable precautions should be taken at all times, in particular when emptying bags or other packaging. Reducing the velocity of transport will reduce charging. Static charge buildup can be a potential fire hazard when used in the presence of volatile or flammable mixtures. Keep away from ignition sources. If product is processed into smaller particles, explosive hazardous conditions must be evaluated. When processing these products, maintain a fire watch if material exceeds 177°C (350°F). Above this threshold, the polymer can release vapors and gases that are irritating to mucous membranes. These substances may include acetaldehyde, acetone, acetic acid, formic acid, formaldehyde, and acrolein. Based on animal data and limited epidemiological evidence, formaldehyde has been listed as a carcinogen. Following all recommendations within this SDS should minimize exposure to thermal processing emissions. Operating below these temperatures does not guarantee the absence of product degradation. The temperatures listed are indicated only for safety reasons (risk of fire and product degradation) and are not recommended for processing. Degradation of the polymer will start at lower temperatures depending on the specific processing conditions.

7(b) Conditions for safe storage, including any incompatibilities

Stable under recommended storage conditions. Do not store outside. Keep container dry. Keep in a cool, dry, well-ventilated place. Store in closed containers, in a secure area to prevent container damage and subsequent spillage. Store away from moisture and heat to maintain the technical properties of the product. Do not store with alkalis, oxidizers, self-igniting products, or acids.

7(c) Specific end use(s)

No additional information available.

SECTION 8: Exposure Controls / Personal Protection

8(a) Exposure Control Limits - Polyethylene

OSHA Table Z-3	Form	Time Weighted Average
	Respirable Fraction	5 mg/m ³
	Total Dust	15 mg/m ³

Control material as a Particulate Not Otherwise Classified (PNOC). The ACGIH Guideline* for respirable dust is 3 mg/m³ and 10 mg/m³ for total dust. The OSHA PEL for respirable dust is 5 mg/m³ and 15 mg/m³ for total dust. *This value is for inhalable (total) particulate matter containing no asbestos and < 1.0% crystalline silica.

Exposure Control Limits - Tungsten ("W")

ACGIH	Form	TWA (Time Weighted Average)
	as W	5 mg/m ³
	STEL (Short Term Exposure Limit)	
	as W	10 mg/m ³

8(b) Appropriate Engineering Controls

Use local exhaust ventilation during processing to reduce exposures. When transferring products, earth/ground all subsequent equipment to minimize charges that may develop. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

8(c) Individual Protection Measures

Personal protective equipment: Gloves. Safety Glasses. Protective Clothing.



Materials for protective clothing: Standard issue work clothes, which may include apron, antistatic safety shoes or boots as necessary.

Eye protection: Use good industrial practice to avoid eye contact. Wear safety glasses with side-shields. Processing of this product releases vapors or fumes which may cause eye irritation - wear chemical goggles. Where eye contact may be likely, wear chemical goggles with a face shield and have eye flushing equipment available.

Skin: Processing of this product releases vapors or fumes which may cause skin irritation. Minimize skin contamination by following good industrial hygiene practice. Wearing protective gloves is recommended. Use heat protective gloves and insulated clothing when handling hot, molten product. Wash hands and contaminated skin thoroughly after contact with processing fumes or vapors or after handling the material.

Respiratory protection:

Avoid breathing dust. Avoid breathing processing fumes or vapors. No respiratory protection is normally required. If heated material generates vapor or fumes that are not adequately controlled by ventilation, wear an appropriate respirator. Use the following elements for air-purifying respirators: Organic Vapor and Formaldehyde. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection. Dust safety masks are recommended when the dust concentration is excessive.

SECTION 9: Physical and Chemical Properties

9(a)	Physical state:	Solid
	Appearance/Form:	Pellets; porous to dense
	Color:	Opaque. Various colors: tan, copper, gray, or black - dependent on filler material
9(b)	Odor:	Essentially odorless, may be faint odor
9(c)	Odor threshold:	Not determined
9(d)	pH:	No data available
9(e)	Melting point:	194 - 284 °F (90 - 140 °C)
	Freezing point:	Not Applicable
9(f)	Boiling point:	Not Applicable
9(g)	Flash point:	Not Applicable
9(h)	Evaporation rate:	Not Applicable, Solid
9(i)	Flammability (solid, gas):	Not Applicable
9(j)	Upper / Lower Flammability:	No data available
	Explosive Limits:	Not determined
9(k)	Vapor pressure:	Not Applicable, Solid
9(l)	Vapor Density:	Not Applicable, Solid
9(m)	Relative density:	Specific Gravity: 1 - 11
9(n)	Solubility (water):	Negligible
	Solubility (other):	No data available No data available
9(o)	Partition Coefficient:	No data available
9(p)	Auto-Ignition Temperature:	No data available
9(q)	Decomposition temperature:	Not determined
9(r)	Viscosity, Kinematic:	Not Applicable
	Viscosity, Dynamic:	Not Applicable
Other	Oxidizing properties:	No data available

SECTION 10: Stability and Reactivity

10(a)	Reactivity:	Non-reactive. The product is stable under normal ambient handling and storage conditions.
10(b)	Chemical Stability:	Stable under normal ambient conditions. Hazardous polymerization does not occur.
10(c)	Possibility of Hazardous Reactions:	Non-reactive. The product is stable under normal handling and storage conditions.
10(d)	Conditions to Avoid:	Avoid prolonged exposure to elevated heat or UV light since this may affect product properties. Product will burn when exposed to continuous sources of ignition. See Hazardous Decomposition below.
10(e)	Incompatible Materials:	Avoid contact with strong oxidizing agents.

10(f) Hazardous Decomposition: Hazardous vapors from heated product are not expected to be generated under normal processing temperatures and conditions. No hazardous decomposition under ambient temperatures. Although highly dependent on temperature and environmental conditions, a variety of thermal decomposition products may be present if the product is overheated, is smoldering, or catches fire. Thermal decomposition giving toxic, flammable, and / or corrosive products: carbon monoxide, other hydrocarbons, and hydrocarbon oxidation products such as ketones, aldehydes (including formaldehyde), and organic acids.

SECTION 11: Toxicological Information

11(a) Routes of Exposure

Aspiration hazard: Presumed not toxic.
 Skin corrosion/irritation: Presumed not toxic. Not irritating.
 Serious eye damage/irritation: No eye damage/irritation.
 Respiratory or skin sensitization: Did not cause sensitization on laboratory animals.

11(b) Symptoms See Section 4

11(c) Effects - Short and Long Term

Carcinogenicity: Not classified

11(d) Toxicity

Toxicity Overview:

This product contains POLYMERIZED OLEFINS. During thermal processing (>350°F, >177°C) polyolefins can release vapors and gases (aldehydes, ketones, and organic acids) which are irritating to the mucous membranes of the eyes, mouth, throat, and lungs. Generally these irritant effects are all transitory. However, prolonged exposure to irritating off-gases can lead to pulmonary edema. Formaldehyde (an aldehyde) has been classified as a carcinogen based on animal data and limited epidemiological evidence.

This product contains the following components which in their pure form have the following characteristics:

CAS-No.	Chemical Name	Effect	Target Organ
7440-33-7	Tungsten	Systemic effects	Eyes, Skin, Respiratory system, blood and blood forming system.

Additional Health Hazard Information:

Tungsten 7440-33-7: Prolonged or repeated breathing of this material may result in chronic bronchitis. Exposure to freshly formed fumes from heated metal may cause "metal fume fever".

Acute Toxicity: Not classified
 Reproductive Toxicity: Not classified
 Specific target organ toxicity (single exposure): Not classified
 Specific target organ toxicity (repeated exposure): Not classified

11(e) Listings

See Section 15

SECTION 12: Ecological Information

- 12(a) Ecotoxicity** Not expected to be harmful to aquatic organisms. Fish or birds may eat pellets which may obstruct their digestive tracts.
- 12(b) Persistence and degradability** Not expected to be readily biodegradable
- 12(c) Bioaccumulative potential** Does not bioaccumulate
- 12(d) Mobility in Soil** Insoluble and floats on water
- 12(e) Other Adverse effects** No data available

SECTION 13: Disposal Considerations

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility. Pigmented, filled, and/or solvent laden product may require special disposal practices in accordance with federal, state, and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal, and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

SECTION 14: Transport Information

In accordance with DOT, this product is not regulated as a hazardous material or dangerous goods for transport.

- 14(a) UN Number:** None
- 14(b) UN Number Shipping Name:** None
- 14(c) Transport Hazard Class(es):** None
- 14(d) Packing Group:** None
- 14(e) Environmental Hazards:** Not a marine pollutant
- 14(f) Transport in Bulk:** None
- 14(g) Special Precautions:** None

SECTION 15: Regulatory Information

US Federal Regulations

SARA Title III - Section 302 Extremely Hazardous Chemicals:
 The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title III - Section 311/312 Hazard Classes:
 Acute, Chronic

SARA Section 313 - Toxic Chemicals:
 Unless specifically identified in this section, this material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Name	Product Identifier	Weight %	SARA 313 - Threshold Values %
None			

CERCLA - Comprehensive Environmental Response, Compensation, & Liability Act - Reportable Quantity (RQ)		
Unless specifically identified in this section, the components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.		
Name	Hazardous Substances RQs	CERCLA EHS RQs
None		

Clean Water Act				
Component	CWA -	CWA - Reportable	CWA - Toxic	CWA - Priority Pollutants
None				

Clean Air Act - Not applicable

RCRA - Resource Conservation and Recovery Act - Not applicable

OSHA	Unless specifically identified in this section, the components in this product are not considered hazardous by OSHA:
	Classified as hazardous based on components

Chemical Inventory Status

European Inventory of Existing Commercial Chemical	EU, EINECS	On or in compliance
United States TSCA (Toxic Substances Control Act) Inventory	TSCA	On or in compliance
Canadian Domestic Substances List	DSL	On or in compliance
China. Inventory of Existing Chemical Substances Produced or Imported in China	IECSC (CN)	On or in compliance
Japan. ENCS - Existing & New Chemical Substances Inventory	ENCS (JP)	Not Determined
Korea. Korean Existing Chemicals Inventory	KECI (KR)	On or in compliance
Philippines Inventory of Chemicals and Chemical Substances	PICCS (PH)	On or in compliance
Australian Inventory of Chemical Substances	AICS	On or in compliance

US State Regulations

California Prop. 65	This product does not contain any chemicals listed by California Prop 65.
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SECTION 16: Other Information

Revision Date: April 15, 2016

Version Number: 04

Ecomass® is a registered trademark.

ABBREVIATIONS / ACRONYMS / REFERENCES:

AND	EU agreement for the International Transport of Dangerous Goods by Inland Waterways, as amended
ADR	EU agreement for the International Carriage of Dangerous Goods by Road, as amended
CAS	Chemical Abstracts Services (Division of the American Chemical Society)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals, as amended
HMIS	Hazardous Materials Identification System
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Code for Dangerous Goods, as amended
LCSO	Lethal Concentration of 50 Percent of Organisms
MARPOL	International Convention for the Prevention of Pollutants from Ships, 1973, as amended

MHLW	Japanese Ministry of Health, Labor, and Welfare
NFPA 704	National Fire Protection Association
OE	Oil Extended
OEL	Occupational Exposure Limit
RID	EU Standards Regulations Concerning the International Transport of Dangerous Goods by Rail
TLV	Threshold Limit Value
TWA	Time Weighted Average
UN	United Nation
USP	United States Pharmacopeia for the Testing of Biological Endpoints for Medical Devices

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