

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/28/2020

Reviewed on 08/28/2020

1 Identification

- . **Product identifier**
- . **Trade name** **POLYESTER TGIC-FREE METALLIC**
- . **Article number:** 29,58,59,68,138,149M
- . **Restrictions** Industrial Powder coating Application
- . **Recommended Use:** Powder coating material
- . **Manufacturer/Supplier:**
USA:
TIGER Drylac U.S.A., Inc.
3945 Swenson Ave
St. Charles, IL 60174
Phone: +1- 630-587-2918
Fax: +1-630-587-2923

Canada:
TIGER Drylac Canada Inc.
110 Southgate Drive
Guelph, Ontario, N1G 4P5
Phone: +1-519-766-4781
Fax: +1-519-766-4787

Mexico
TIGER Drylac Mexico S.A. de C.V.
Circuito Exportación 212, Parque Industrial Tres Naciones
San Luis Potosí, SLP, C.P. 78395
Phone +52-444-799-7243
Fax +52-444-799-7244

- . **Informing department:** Product Safety Department
- . **Emergency telephone number:**
24/7:1-800-255-3924; International:+01 or +001-813-248-0585

2 Hazard(s) identification

- . **Classification of the substance or mixture**
Combustible Dust May form combustible dust concentrations in air.

- . **Label elements**
- . **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- . **Hazard pictograms** Void
- . **Signal word** Warning
- . **Hazard statements**
May form combustible dust concentrations in air.
- . **Classification system**
- . **NFPA ratings (scale 0-4)**



Health = 1
Fire = 1
Reactivity = 1

- . **HMIS-RATINGS (SCALE 0 - 4)**



Health = 1
Fire = 1
Reactivity = 1

- . **Other hazards**
- . **Results of PBT and vPvB assessment**
- . **PBT:** Not applicable.
- . **vPvB:** Not applicable.

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3 Composition/information on ingredients

- . **Chemical characterization: Mixtures**
- . **Description:** Mixture consisting of the following components with harmless additives.

. **Hazardous ingredients:**

13463-67-7	titanium dioxide; titanium (IV) oxide	10-25%
7727-43-7	barium sulphate, natural; barium sulfate	10-25%
21645-51-2	aluminium hydroxide; aluminum (III) hydroxide Acute Tox. 4, H332	2.5-10%
7429-90-5	aluminum powder (stabilized); aluminium powder (pyrophoric) Flam. Sol. 1, H228; Water-react. 2, H261	<2.5%
12001-26-2	mica	<2.5%

. **Additional information**

For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

- . **Description of first aid measures**
- . **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- . **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- . **After eye contact** Rinse opened eye for several minutes under running water.
- . **After swallowing** Seek immediate medical advice.
- . **Information for doctor**
- . **Most important symptoms and effects, both acute and delayed** None
- . **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- . **Extinguishing media**
- . **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- . **For safety reasons unsuitable extinguishing media**
Gaseous extinguishing agents (e.g. Carbon dioxide) under high pressure
- . **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
CO, CO₂, NO_x
- . **Advice for firefighters**
- . **Protective equipment:**
Put on breathing apparatus.
Wear full protective suit.

6 Accidental release measures

- . **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Avoid causing dust.
Keep away from ignition sources
Wear protective clothing.
Use breathing protection against the effects of dust.
- . **Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
- . **Methods and material for containment and cleaning up:** Collect mechanically.
- . **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.
- . **Protective Action Criteria for Chemicals**

. **PAC-1:**

13463-67-7	titanium dioxide	30 mg/m ³
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7727-43-7	barium sulphate, natural	15 mg/m ³
21645-51-2	aluminium hydroxide	8.7 mg/m ³
12001-26-2	mica	9 mg/m ³
7631-86-9	silicon dioxide, chemically prepared	18 mg/m ³
1344-28-1	aluminium oxide	15 mg/m ³
112926-00-8	Silicon dioxide	18 mg/m ³
471-34-1	calcium carbonate	45 mg/m ³
1314-23-4	zirconium oxide	14 mg/m ³
1309-37-1	diiron trioxide	15 mg/m ³
14808-60-7	quartz (SiO ₂)	0.075 mg/m ³
111-42-2	2,2'-iminodiethanol	3 mg/m ³
1308-14-1	chromium hydroxide(III)	3 mg/m ³
18282-10-5	tin dioxide	7.6 mg/m ³

. PAC-2:

13463-67-7	titanium dioxide	330 mg/m ³
7727-43-7	barium sulphate, natural	170 mg/m ³
21645-51-2	aluminium hydroxide	73 mg/m ³
12001-26-2	mica	99 mg/m ³
7631-86-9	silicon dioxide, chemically prepared	740 mg/m ³
1344-28-1	aluminium oxide	170 mg/m ³
112926-00-8	Silicon dioxide	200 mg/m ³
471-34-1	calcium carbonate	210 mg/m ³
1314-23-4	zirconium oxide	110 mg/m ³
1309-37-1	diiron trioxide	360 mg/m ³
14808-60-7	quartz (SiO ₂)	33 mg/m ³
111-42-2	2,2'-iminodiethanol	28 mg/m ³
1308-14-1	chromium hydroxide(III)	33 mg/m ³
18282-10-5	tin dioxide	85 mg/m ³

. PAC-3:

13463-67-7	titanium dioxide	2,000 mg/m ³
7727-43-7	barium sulphate, natural	990 mg/m ³
21645-51-2	aluminium hydroxide	440 mg/m ³
12001-26-2	mica	590 mg/m ³
7631-86-9	silicon dioxide, chemically prepared	4,500 mg/m ³
1344-28-1	aluminium oxide	990 mg/m ³
112926-00-8	Silicon dioxide	1,200 mg/m ³
471-34-1	calcium carbonate	1,300 mg/m ³
1314-23-4	zirconium oxide	680 mg/m ³
1309-37-1	diiron trioxide	2,200 mg/m ³
14808-60-7	quartz (SiO ₂)	200 mg/m ³
111-42-2	2,2'-iminodiethanol	130 mg/m ³
1308-14-1	chromium hydroxide(III)	200 mg/m ³
18282-10-5	tin dioxide	510 mg/m ³

7 Handling and storage**. Handling****. Precautions for safe handling** No special measures required.**. Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Dust can combine with air to form an explosive mixture.

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- . **Conditions for safe storage, including any incompatibilities**
- . **Storage**
- . **Requirements to be met by storerooms and containers:**
Store only in the original container.
Static charges may build up in the powder
- . **Information about storage in one common storage facility:** Not required.
- . **Further information about storage conditions:** None.
- . **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- . **Additional information about design of technical systems:** No further data; see item 7.
- . **Control parameters**

Components with critical values that require monitoring at the workplace:**13463-67-7 titanium dioxide**

PEL (U.S.A)	Long-term value: 15* mg/m ³ *total dust
REL (U.S.A)	See Pocket Guide App. A
TLV (U.S.A)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust;**respirable fraction; IARC 2B
VLE (Mexico)	Long-term value: 10 mg/m ³ A4

7727-43-7 barium sulphate, natural

PEL (U.S.A)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (U.S.A)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (U.S.A)	Long-term value: 5* mg/m ³ *inhalable fraction; E
EL (Canada)	Long-term value: 5 mg/m ³ inhalable
VLE (Mexico)	Long-term value: 10 mg/m ³

21645-51-2 aluminium hydroxide

REL (U.S.A)	Long-term value: 2 mg/m ³ as Al
TLV (U.S.A)	Long-term value: 1* mg/m ³ as Al;*as respirable fraction
EL (Canada)	Long-term value: 10 mg/m ³

7429-90-5 aluminum powder (stabilized)

PEL (U.S.A)	Long-term value: 15*; 5** mg/m ³ *Total dust; ** Respirable fraction
REL (U.S.A)	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV (U.S.A)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
EL (Canada)	Long-term value: 1.0 mg/m ³ respirable, as Al
VLE (Mexico)	Long-term value: 1* mg/m ³ A4, *fracciòn respirable

12001-26-2 mica

PEL (U.S.A)	Long-term value: 20 mppcf ppm <1% crystalline silica
REL (U.S.A)	Long-term value: 3* mg/m ³ *respirable dust; containing < 1% quartz
TLV (U.S.A)	Long-term value: 3* NIC-0.1** mg/m ³ *resp.fraction;**no asbestos,<1%crystalline silica
EL (Canada)	Long-term value: 3 mg/m ³

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EV (Canada)	Long-term value: 3 (D) mg/m ³ respirable
VLE (Mexico)	Long-term value: 3* mg/m ³ *fracción respirable

Regulatory information

PEL (U.S.A): Guide to Occupational Exposure Values (OSHA PELs)
 REL (U.S.A): Guide to Occupational Exposure Values (NIOSH RELs)
 TLV (U.S.A): Guide to Occupational Exposure Values (ACGIH)
 EL (Canada): SOR / 86-304, Control of Hazards 10.19(1) (a)
 VLE (Mexico): NOM-010-STPS-2014

Additional information:

The lists that were valid during the compilation were used as basis.

Exposure controls A dust collection system is recommended.

Personal protective equipment

General protective and hygienic measures

Wash hands during breaks and at the end of the work.

Breathing equipment:



In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

Protection of hands:



Protective gloves.

Antistatic gloves

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:



Safety Glasses

Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:

Solid

Colour:

According to Trade Name

Odor:

Nearly odourless

Odor threshold:

Not applicable.

pH-value:

Not applicable.

Change in condition

Melting point/Melting range:

> 50 C / 120F

Freezing point :

Not applicable

Flash point:

Not applicable

Flammability (solid, gaseous)

Not applicable.

Auto-ignition temperature:

400 °C (752 °F)

Decomposition temperature:

Not applicable.

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- . **Self-inflammability:** Product is not selfigniting.
- . **Danger of explosion:** Product is not explosive. However, formation of explosive air/dust mixtures is possible
- . **Critical values for explosion:**
 - Lower:** 76 g/m³
 - Upper:** Not applicable
- . **Steam pressure:** Not applicable.
- . **Density (Specific gravity) at 20 °C (68 °F)** 1.63 g/cm³ (13.6 lbs/gal)
- . **Relative density** Not applicable
- . **Vapor pressure:** Not applicable.
- . **Evaporation rate** Not applicable.
- . **Solubility in / Miscibility with**
 - Water:** Insoluble
- . **Partition coefficient (n-octanol/water):** Not available.
- . **Viscosity:**
 - dynamic:** Not applicable.
 - kinematic:** Not applicable.
- . **Solvent content:**
 - Organic solvents:** 0.0 %
 - Solids content:** 100.0 %
- . **Other information** Chemical stability: Not applicable

10 Stability and reactivity

- . **Reactivity** No further relevant information available.
- . **Chemical stability** Not applicable
- . **Conditions to be avoided:** No decomposition if used according to specifications.
- . **Possibility of hazardous reactions** No dangerous reactions known
- . **Conditions to avoid** No further relevant information available.
- . **Incompatible materials:** No further relevant information available.
- . **Hazardous decomposition products:** In case of fire: CO, CO2, NOx

11 Toxicological information

- . **Information on toxicological effects**
- . **Acute toxicity:**

. **LD/LC50 values that are relevant for classification:**

Oral	LD50	>2,000 mg/kg (rat)
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- . **Primary irritant effect:**
 - on the skin:** No irritant effect.
 - on the eye:** Possible irritant effects
- . **Sensitization:** No sensitizing effect known.
- . **Additional toxicological information:**
- . **Carcinogenic categories**

. **IARC (International Agency for Research on Cancer)**

13463-67-7	titanium dioxide	2B
7631-86-9	silicon dioxide, chemically prepared	3
112926-00-8	Silicon dioxide	3
1309-37-1	diiron trioxide	3
14808-60-7	quartz (SiO ₂)	1
111-42-2	2,2'-iminodiethanol	2B

. **NTP (National Toxicology Program)**

14808-60-7	quartz (SiO ₂)	K
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. OSHA-Ca (Occupational Safety & Health Administration)

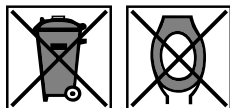
None of the ingredients is listed.

12 Ecological information

- . **Toxicity**
- . **Aquatic toxicity:** No further relevant information available.
- . **Persistence and degradability** No further relevant information available.
- . **Behaviour in environmental systems:**
- . **Bioaccumulative potential** No further relevant information available.
- . **Mobility in soil** No further relevant information available.
- . **Additional ecological information:**
- . **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
- . **Results of PBT and vPvB assessment**
- . **PBT:** Not applicable.
- . **vPvB:** Not applicable.
- . **Other adverse effects** No further relevant information available.

13 Disposal considerations

- . **Waste treatment methods**
- . **Recommendation**



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- . **Uncleaned packagings:**
- . **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- . **UN-Number** Not
- . **DOT, ADR, IMDG, IATA** Void
- . **UN proper shipping name** Not Applicable
- . **DOT, IMDG, IATA** Void
- . **ADR** N/A
- . **Transport hazard class(es)** Void
- . **DOT, IMDG, IATA** Void
- . **Class** Not regulated.
- . **ADR, ADN** Void
- . **Class** Void
- . **Packing group** N/A
- . **DOT, IMDG, IATA** Void
- . **ADR** Void
- . **Environmental hazards:** Not applicable.
- . **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- . **UN "Model Regulation":** Void

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15 Regulatory information

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

. **SARA (Superfund Amendments and Reauthorization Act):**

. **Section 355 (Extremely hazardous substances):**

None of the ingredients is listed.

. **Section 313 (Specific toxic chemical listings):**

7727-43-7	barium sulphate, natural
7429-90-5	aluminum powder (stabilized)
1344-28-1	aluminium oxide

. **TSCA (Toxic Substances Control Act):**

13463-67-7	titanium dioxide	ACTIVE
7727-43-7	barium sulphate, natural	ACTIVE
21645-51-2	aluminium hydroxide	ACTIVE
7631-86-9	silicon dioxide, chemically prepared	ACTIVE
1332-58-7	kaolin	ACTIVE
1344-28-1	aluminium oxide	ACTIVE
119-53-9	Benzoin	ACTIVE
471-34-1	calcium carbonate	ACTIVE
1860-26-0	2-ethyl-N,N-bis(2-ethylhexyl)hexylamine	ACTIVE

. **Hazardous Air Pollutants**

111-42-2	2,2'-iminodiethanol
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. **Proposition 65:**

. **Chemicals known to cause cancer:**

13463-67-7	titanium dioxide
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. **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

. **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

. **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

. **Carcinogenicity categories**

. **EPA (Environmental Protection Agency)**

7727-43-7	barium sulphate, natural	D, CBD(inh), NL(oral)
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. **TLV (Threshold Limit Value established by ACGIH)**

13463-67-7	titanium dioxide	A4
1332-58-7	kaolin	A4
1344-28-1	aluminium oxide	A4
1314-23-4	zirconium oxide	A4
1309-37-1	diiron trioxide	A4
14808-60-7	quartz (SiO ₂)	A2
111-42-2	2,2'-iminodiethanol	A3

. **NIOSH-Ca (National Institute for Occupational Safety and Health)**

13463-67-7	titanium dioxide
14808-60-7	quartz (SiO ₂)

. **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

. **Hazard pictograms** Void

. **Signal word** Warning

. **Hazard statements**

May form combustible dust concentrations in air.

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. **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

. **Relevant phrases**

H228 Flammable solid.

H261 In contact with water releases flammable gas.

H332 Harmful if inhaled.

. **Date of preparation / last revision** 08/28/2020 / -. **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Sol. 1: Flammable solids - Category 1

Water-react. 2: Substances and mixtures which in contact with water emit flammable gases - Category 2

Acute Tox. 4: Acute toxicity - Category 4

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