

Safety Data Sheet

acc. GHS

Printing date 11/08/2017

Reviewed on 11/08/2017

* 1 Identification

- . **Product identifier**
- . **Trade name** POLYESTER EPOXY HYBRID BASED POWDER COATING METALLIC

- . **Article number:** (09,89)M
- . **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	10-25%
7727-43-7	barium sulphate, natural	10-25%
54553-90-1	benzene-1,2,4,5-tetracarboxylic acid, compound with 4,5-dihydro-2-phenyl-1H-imidazole (1:1) Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	<2.5%
7429-90-5	aluminum powder (stabilized) 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**
- . **General information** No special measures required.
- . **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** In case of persistent symptoms consult doctor.
- . **Information for doctor**
- . **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- . **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.
- . **Special hazards arising from the substance or mixture**
No further relevant information available.
- . **Advice for firefighters**
- . **Protective equipment:** No special measures required.

* 6 Accidental release measures

- . **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Avoid causing 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**
No dangerous materials are released.
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:		
25036-25-3	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]	12 mg/m ³
13463-67-7	titanium dioxide	30 mg/m ³

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7727-43-7	barium sulphate, natural	15 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
1314-23-4	zirconium dioxide	14 mg/m ³
471-34-1	calcium carbonate	45 mg/m ³
14808-60-7	quartz (SiO ₂)	0.075 mg/m ³
1309-37-1	diiron trioxide	15 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:

25036-25-3	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]	130 mg/m ³
13463-67-7	titanium dioxide	330 mg/m ³
7727-43-7	barium sulphate, natural	170 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
1314-23-4	zirconium dioxide	110 mg/m ³
471-34-1	calcium carbonate	210 mg/m ³
14808-60-7	quartz (SiO ₂)	33 mg/m ³
1309-37-1	diiron trioxide	360 mg/m ³
1308-14-1	chromium hydroxide(III)	33 mg/m ³
18282-10-5	tin dioxide	85 mg/m ³

. PAC-3:

25036-25-3	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]	790 mg/m ³
13463-67-7	titanium dioxide	2,000 mg/m ³
7727-43-7	barium sulphate, natural	990 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
1314-23-4	zirconium dioxide	680 mg/m ³
471-34-1	calcium carbonate	1,300 mg/m ³
14808-60-7	quartz (SiO ₂)	200 mg/m ³
1309-37-1	diiron trioxide	2,200 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.

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Dust can combine with air to form an explosive mixture.

- . **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:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

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 withdrawn from NIC
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust; **respirable fraction; IARC 2B
EV (Canada)	Long-term value: 10 mg/m ³ total dust
LMPE (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: 10* 3** mg/m ³ *total dust, **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ total dust
LMPE (Mexico)	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
LMPE (Mexico)	Long-term value: 1* mg/m ³ A4, *fracción respirable

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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* mg/m ³ *as respirable fraction
EL (Canada)	Long-term value: 3 mg/m ³
EV (Canada)	Long-term value: 3(D) mg/m ³ respirable
LMPE (Mexico)	Long-term value: 3* mg/m ³ *fracción respirable

. Additional information:

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

. Exposure controls

. Personal protective equipment

. General protective and hygienic measures

The usual precautionary measures should be adhered to in handling the chemicals.

. 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.

. 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

Smell: Characteristic

Odor threshold: Not determined

pH-value: Not applicable

. Change in condition

Melting point/Melting range: > 50 C / 120F

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Boiling point/Boiling range:	Not applicable
. Flash point:	Not applicable
. Inflammability (solid, gaseous)	Not determined
. Ignition temperature:	400 °C (752 °F)
. Decomposition temperature:	Not determined
. 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:	Not determined.
Upper:	Not determined.
. Steam pressure:	Not applicable.
. Density (Specific gravity) at 20 °C (68 °F)	1.65 g/cm ³ (13.77 lbs/gal)
. Relative density	Not determined.
. Vapor density	Not applicable.
. Evaporation rate	Not applicable.
. Solubility in / Miscibility with	
Water:	Unsoluble
. Partition coefficient (n-octanol/water):	Not determined.
. Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
. Solvent content:	
Organic solvents:	0.0 %
Solids content:	100.0 %
. Other information	No further relevant information available.

* 10 Stability and Reactivity

- . **Reactivity** No further relevant information available.
- . **Chemical stability**
- . **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, NO_x

* 11 Toxicological Information

- . **Information on toxicological effects**
 - . **Acute toxicity:**
 - . **Primary irritant effect:**
 - . **on the skin:** No irritant effect.
 - . **on the eye:** No irritant effect.
 - . **Sensitization:** No sensitizing effect known.
 - . **Additional toxicological information:**
- The product is not subject to classification according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version. When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

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. **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
14808-60-7	quartz (SiO ₂)	1
1309-37-1	diiron trioxide	3
. NTP (National Toxicology Program)		
14808-60-7	quartz (SiO ₂)	K
. 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:**
Water hazard class 1 (Self-assessment): slightly hazardous for water.
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** Smaller quantities can be disposed with household garbage.
- . **Uncleaned packagings:**
- . **Recommendation:** Disposal must be made according to official regulations.

* **14 Transport information**

- . **UN-Number**
- . **ADR** N/A
- . **UN proper shipping name** N/A
- . **DOT, ADR, IMDG, IATA** N/A
- . **Transport hazard class(es)**
- . **DOT, IMDG, IATA**
- . **Class** Not regulated.
- . **Packing group**
- . **ADR, IMDG, IATA** N/A
- . **Environmental hazards:**
- . **Marine pollutant:** No
- . **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

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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):**

All ingredients are listed.

. **TSCA new (21st Century Act) (Substances not listed)**

7429-90-5	aluminum powder (stabilized)
12001-26-2	mica

. **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.

. **Cancerogenity 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
1344-28-1	aluminium oxide	A4
1332-58-7	kaolin	A4
1314-23-4	zirconium dioxide	A4
14808-60-7	quartz (SiO ₂)	A2
1309-37-1	diiron trioxide	A4

. **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.

. **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.

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. Relevant phrases

H228 Flammable solid.
 H261 In contact with water releases flammable gas.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.

. Date of preparation / last revision 11/08/2017 / -

. 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)
 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
 Skin Irrit. 2: Skin corrosion/irritation - Category 2
 Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A
 STOT SE 3: Specific target organ toxicity (single exposure) - Category 3

. * Data compared to the previous version altered.

US