

# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/12/2020

Reviewed on 08/21/2019

## \* 1 Identification

- . **Product identifier**
- . **Trade name** **EPOXY BASED POWDER COATING**
- . **Article number:** 2/3/4/5/8(69)
- . **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**



GHS07

Eye Irrit. 2A      H319 Causes serious eye irritation.

Skin Sens. 1      H317 May cause an allergic skin reaction.

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**



GHS07

- . **Signal word** Warning

- . **Hazard-determining components of labeling:**

1-o-tolylbiguanide

- . **Hazard statements**

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

May form combustible dust concentrations in air.

- . **Precautionary statements**

P260 Do not breathe dust.

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- P264 Wash thoroughly after handling.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P280 Wear protective gloves / eye protection / face protection.  
 P302+P352 If on skin: Wash with plenty of water.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P321 Specific treatment (see on this label).  
 P337+P313 If eye irritation persists: Get medical advice/attention.  
 P363 Wash contaminated clothing before reuse.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- . **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.

**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%
54553-90-1	pyromellitic acid, mono(phenylimidazoline) salt; benzene-1,2,4,5-tetracarboxylic acid, compound with 4,5-dihydro-2-phenyl-1H-imidazole (1:1)	2.5-10%
	Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	
93-69-6	1-o-tolylbiguanide	2.5-10%
	Acute Tox. 4, H302; Eye Irrit. 2A, H319; Skin Sens. 1, H317	
936-49-2	2-phenyl-2-imidazoline	<2.5%
	Acute Tox. 3, H301; Eye Dam. 1, H318; Skin Irrit. 2, H315	

**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 and call for doctor for safety reasons.  
 In case of unconsciousness bring patient into stable side position for transport.
- . **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.

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**5 Fire-fighting measures**

- . **Extinguishing media**
- . **Suitable extinguishing agents**  
CO<sub>2</sub>, 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, CO<sub>2</sub>, NO<sub>x</sub>
- . **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.  
Inform respective authorities in case product reaches water or sewage system.
- . **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:**

25036-25-3	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]	12 mg/m <sup>3</sup>
13463-67-7	titanium dioxide	30 mg/m <sup>3</sup>
7727-43-7	barium sulphate, natural	15 mg/m <sup>3</sup>
7631-86-9	silicon dioxide, chemically prepared	18 mg/m <sup>3</sup>
1344-28-1	aluminium oxide	15 mg/m <sup>3</sup>
471-34-1	calcium carbonate	45 mg/m <sup>3</sup>
1314-23-4	zirconium oxide	14 mg/m <sup>3</sup>
14808-60-7	quartz (SiO <sub>2</sub> )	0.075 mg/m <sup>3</sup>

**. 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 <sup>3</sup>
13463-67-7	titanium dioxide	330 mg/m <sup>3</sup>
7727-43-7	barium sulphate, natural	170 mg/m <sup>3</sup>
7631-86-9	silicon dioxide, chemically prepared	740 mg/m <sup>3</sup>
1344-28-1	aluminium oxide	170 mg/m <sup>3</sup>
471-34-1	calcium carbonate	210 mg/m <sup>3</sup>
1314-23-4	zirconium oxide	110 mg/m <sup>3</sup>
14808-60-7	quartz (SiO <sub>2</sub> )	33 mg/m <sup>3</sup>

**. 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 <sup>3</sup>
13463-67-7	titanium dioxide	2,000 mg/m <sup>3</sup>

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7727-43-7	barium sulphate, natural	990 mg/m <sup>3</sup>
7631-86-9	silicon dioxide, chemically prepared	4,500 mg/m <sup>3</sup>
1344-28-1	aluminium oxide	990 mg/m <sup>3</sup>
471-34-1	calcium carbonate	1,300 mg/m <sup>3</sup>
1314-23-4	zirconium oxide	680 mg/m <sup>3</sup>
14808-60-7	quartz (SiO <sub>2</sub> )	200 mg/m <sup>3</sup>

**7 Handling and storage****. Handling****. Precautions for safe handling**

No special measures required.

Store in cool, dry place in tightly closed containers.

Prevent formation of dust.

**. Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

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:**

Store in cool, dry conditions in well sealed containers.

**. 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 other constituents have no known exposure limits.

**13463-67-7 titanium dioxide**

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

**7727-43-7 barium sulphate, natural**

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

**. 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)

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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**

Instantly remove any soiled and impregnated garments.

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:**

&gt; 50 C / 120F

**Boiling point/Boiling range:**

&gt;260 °C (&gt;500 °F)

**Freezing point :**

Not applicable

**. Flash point:**

Not applicable

**. Flammability (solid, gaseous)**

Not applicable.

**. Auto-ignition temperature:**

410 °C (770 °F)

**. Decomposition temperature:**

Not applicable.

**. 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.

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Upper:	Not applicable
. Steam pressure:	Not applicable.
. Density (Specific gravity) at 20 °C (68 °F)	1.68 g/cm <sup>3</sup> (14.02 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:	
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, CO<sub>2</sub>, NO<sub>x</sub>

**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:** Sensitization possible by skin contact.
- . **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:  
Irritant

- . **Carcinogenic categories**

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

13463-67-7	titanium dioxide	2B
7631-86-9	silicon dioxide, chemically prepared	3
14808-60-7	quartz (SiO <sub>2</sub> )	1

- . **NTP (National Toxicology Program)**

14808-60-7	quartz (SiO <sub>2</sub> )	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.

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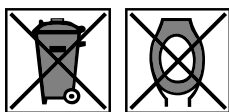
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- . **Mobility in soil** No further relevant information available.
- . **Ecotoxicological effects:**
- . **Remark:** Harmful to fish
- . **Additional ecological information:**
- . **General notes:**  
Generally not hazardous for water.  
Harmful to aquatic organisms
- . **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** N/A
- . **Packing group** Void
- . **DOT, IMDG, IATA** Void
- . **ADR** N/A
- . **Environmental hazards:** Not applicable.
- . **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- . **UN "Model Regulation":** Void

**\*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

1344-28-1 aluminium oxide

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

All components have the value ACTIVE.

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<b>. Hazardous Air Pollutants</b>
None of the ingredients is listed.

**. Proposition 65:**

<b>. Chemicals known to cause cancer:</b>
13463-67-7   titanium dioxide

<b>. Chemicals known to cause reproductive toxicity for females:</b>
None of the ingredients is listed.

<b>. Chemicals known to cause reproductive toxicity for males:</b>
None of the ingredients is listed.

<b>. Chemicals known to cause developmental toxicity:</b>
None of the ingredients is listed.

**. Cancerogenity categories**

<b>. EPA (Environmental Protection Agency)</b>	
7727-43-7   barium sulphate, natural	D, CBD(inh), NL(oral)

<b>. TLV (Threshold Limit Value established by ACGIH)</b>	
13463-67-7   titanium dioxide	A4
1344-28-1   aluminium oxide	A4
1332-58-7   kaolin	A4
1314-23-4   zirconium oxide	A4
14808-60-7   quartz (SiO <sub>2</sub> )	A2

<b>. NIOSH-Ca (National Institute for Occupational Safety and Health)</b>
13463-67-7   titanium dioxide
14808-60-7   quartz (SiO <sub>2</sub> )

**. GHS label elements**

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

**. Hazard pictograms**

GHS07

**. Signal word** Warning**. Hazard-determining components of labeling:**

1-o-tolylbiguanide

**. Hazard statements**

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

May form combustible dust concentrations in air.

**. Precautionary statements**

P260 Do not breathe dust.

P264 Wash thoroughly after handling.

P272 Contaminated work clothing must not be allowed out of the workplace.

P280 Wear protective gloves / eye protection / face protection.

P302+P352 If on skin: Wash with plenty of water.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P321 Specific treatment (see on this label).

P337+P313 If eye irritation persists: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**. 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**

H301 Toxic if swallowed.  
 H302 Harmful if swallowed.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H335 May cause respiratory irritation.

**. Date of preparation / last revision 08/12/2020 / -****. 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  
 Acute Tox. 3: Acute toxicity - Category 3  
 Acute Tox. 4: Acute toxicity - Category 4  
 Skin Irrit. 2: Skin corrosion/irritation - Category 2  
 Eye Dam. 1: Serious eye damage/eye irritation - Category 1  
 Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A  
 Skin Sens. 1: Skin sensitisation - Category 1  
 STOT SE 3: Specific target organ toxicity (single exposure) - Category 3

**. \* Data compared to the previous version altered.**