

1 Identification of the substance/mixture and of the company/undertaking

· **Product identifier**

· **Trade name:** **B2190 BOYSEN EPOXY ENAMEL BLACK**

· **Relevant identified uses of the substance or mixture and uses advised against**

· **Application of the substance / the preparation**

Boysen Epoxy Enamel Silver Gray, is a high quality, two component paint that has excellent corrosion and sealing properties.

Principal Uses : It is being used for topcoat for epoxy primer that can be applied for interior surfaces such as metal, galvanized iron, wood and masonry.

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Pacific Paint (Boysen) Phils., Inc.
292 D. Tuazon St., Quezon City
1115 Philippines

· **Further information obtainable from:** Product safety department

· **Emergency telephone number:**

Telephone Nos.: +63 2 364 3505; +63 2 365 0561
Facsimile Nos.: +63 2 367 8878; +63 2 364 0472
Email Address : inquiry@boysen.com.ph
Website Address : www.boysen.com.ph

2 Hazards identification

· **Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

Carc. 1B H350 May cause cancer.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

H319 Causes serious eye irritation.

Acute Tox. 5 H313 May be harmful in contact with skin.

Acute Tox. 5 H333 May be harmful if inhaled.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



T; Toxic

R45-46: May cause cancer. May cause heritable genetic damage.

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**Xn; Harmful**

R20/21: Harmful by inhalation and in contact with skin.

**F; Highly flammable**

R11: Highly flammable.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Label elements

Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

Code letter and hazard designation of product:

**T Toxic****F Highly flammable**

Hazard-determining components of labelling:

Naphtha (petroleum), hydrotreated heavy
p-xylene

Risk phrases:

45 May cause cancer.

46 May cause heritable genetic damage.

11 Highly flammable.

20/21 Also harmful by inhalation and in contact with skin.

Safety phrases:

53 Avoid exposure - obtain special instructions before use.

1/2 Keep locked up and out of the reach of children.

9 Keep container in a well-ventilated place.

29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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 of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 106-42-3 EINECS: 203-396-5	p-xylene Xn R20/21; Xi R38 R10 Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	10-25%
CAS: 108-10-1 EINECS: 203-550-1	4-methylpentan-2-one Xn R20; Xi R36/37; F R11 R66 Flam. Liq. 2, H225; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	10-25%
CAS: 13463-67-7 EINECS: 236-675-5	titanium dioxide substance with a Community workplace exposure limit Acute Tox. 5, H333	2.5-10%
CAS: 64742-48-9 EINECS: 265-150-3	Naphtha (petroleum), hydrotreated heavy T Carc. Cat. 2, Muta. Cat. 2 R45-46; Xn R65 Carc. 1B, H350; Asp. Tox. 1, H304; H227	2.5-10%
CAS: 1333-86-4 EINECS: 215-609-9	Carbon black F+ R12 Self-heat. 2, H252	2.5-10%
CAS: 111-76-2 EINECS: 203-905-0	2-butoxyethanol Xn R20/21/22; Xi R36/38 Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; H227	½ 2.5%
CAS: 95-63-6 EINECS: 202-436-9	1,2,4-trimethylbenzene Xn R20; Xi R36/37/38; N R51/53 R10 Flam. Liq. 3, H226; Aquatic Chronic 2, H411; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	½ 2.5%

· **Additional information:**

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

CAS: 51274-00-1 EINECS: 257-098-5	Synthetic Iron Oxide	Acute Tox. 5, H303	2.5-10%
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4 First aid measures

· **Description of first aid measures**

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water.

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- **After swallowing:** If symptoms persist 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 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **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 disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

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· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

106-42-3 p-xylene

PEL (USA)	435 mg/m ³ , 100 ppm
REL (USA)	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV (USA)	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm
IOELV (EU)	BEI Short-term value: 442 mg/m ³ , 100 ppm Long-term value: 221 mg/m ³ , 50 ppm Skin

108-10-1 4-methylpentan-2-one

PEL (USA)	410 mg/m ³ , 100 ppm
REL (USA)	Short-term value: 300 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm
TLV (USA)	Short-term value: 307 mg/m ³ , 75 ppm Long-term value: 82 mg/m ³ , 20 ppm
IOELV (EU)	BEI Short-term value: 208 mg/m ³ , 50 ppm Long-term value: 83 mg/m ³ , 20 ppm

13463-67-7 titanium dioxide

PEL (USA)	15* mg/m ³ *total dust
REL (USA)	See Pocket Guide App. A
TLV (USA)	10 mg/m ³

1333-86-4 Carbon black

PEL (USA)	3.5 mg/m ³
REL (USA)	3.5* mg/m ³ *0.1 in presence of PAHs, as PAHs; 10-hr TWA
TLV (USA)	3* mg/m ³ *inhalable fraction

111-76-2 2-butoxyethanol

ACGIH (USA)	Short-term value: 20 ppm
PEL (USA)	240 mg/m ³ , 50 ppm Skin
REL (USA)	24 mg/m ³ , 5 ppm Skin
TLV (USA)	97 mg/m ³ , 20 ppm BEI
IOELV (EU)	Short-term value: 246 mg/m ³ , 50 ppm Long-term value: 98 mg/m ³ , 20 ppm Skin

· **Additional information:** The lists valid during the making were used as basis.

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· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **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:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:

Liquid

Colour:

According to product specification

· **Odour:**

Aromatic

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition**

Melting point/Melting range:

Undetermined.

Boiling point/Boiling range:

114°C

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· Flash point:	14°C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	240°C
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	1.7 Vol %
Upper:	9.0 Vol %
· Vapour pressure at 20°C:	8.2 hPa
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	34.3 %
Water:	0.5 %
VOC (EC)	278.9 g/L
Solids content:	8.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / 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:** No dangerous decomposition products known.

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11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

106-42-3 p-xylene

Oral	LD50	5000 mg/kg (rat)
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64742-48-9 Naphtha (petroleum), hydrotreated heavy

Oral	LD50	>5000 mg/kg (rat)
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Dermal	LD50	>3000 mg/kg (rab)
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· **Primary irritant effect:**

· **on the skin:** Cause mild irritation

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Carcinogenic.

The product can cause inheritable damage.

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 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

· **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 together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

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14 Transport information

· UN-Number · ADR, IMDG, IATA	UN1993
· UN proper shipping name · ADR · IMDG, IATA	1993 FLAMMABLE LIQUID, N.O.S. (METHYL ISOBUTYL KETONE, XYLENES), special provision 640D FLAMMABLE LIQUID, N.O.S. (METHYL ISOBUTYL KETONE, XYLENES)
· Transport hazard class(es) · ADR	
	
· Class · Label	3 (F1) Flammable liquids. 3
· IMDG, IATA	
	
· Class · Label	3 Flammable liquids. 3
· Packing group · ADR, IMDG, IATA	II
· Environmental hazards: · Marine pollutant:	No
· Special precautions for user · Danger code (Kemler): · EMS Number:	Warning: Flammable liquids. 33 F-E,S-E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Tunnel restriction code	D/E
· UN "Model Regulation":	UN1993, FLAMMABLE LIQUID, N.O.S. (METHYL ISOBUTYL KETONE, XYLENES), special provision 640D, 3, II

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15 Regulatory information

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

· **Philippines Inventory of Chemicals and Chemical Substances**

106-42-3	p-xylene
108-10-1	4-methylpentan-2-one
13463-67-7	titanium dioxide
64742-48-9	Naphtha (petroleum), hydrotreated heavy
1333-86-4	Carbon black
51274-00-1	Synthetic Iron Oxide
111-76-2	2-butoxyethanol
7631-86-9	silicon dioxide, chemically prepared
21645-51-2	aluminium hydroxide
95-63-6	1,2,4-trimethylbenzene
1330-20-7	xylene
14808-60-7	Quartz (SiO ₂)

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H227	Combustible liquid.
H252	Self-heating in large quantities; may catch fire.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H333	May be harmful if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.
H411	Toxic to aquatic life with long lasting effects.
R10	Flammable.
R11	Highly flammable.
R12	Extremely flammable.
R20	Harmful by inhalation.
R20/21	Harmful by inhalation and in contact with skin.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.

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- R36/37 Irritating to eyes and respiratory system.
 R36/37/38 Irritating to eyes, respiratory system and skin.
 R36/38 Irritating to eyes and skin.
 R38 Irritating to skin.
 R45 May cause cancer.
 R46 May cause heritable genetic damage.
 R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R65 Harmful: may cause lung damage if swallowed.
 R66 Repeated exposure may cause skin dryness or cracking.

Department issuing MSDS:

Safety, Health and Environment Department
 Gretchen A. Fontejon - g_fontejon@boysen.com.ph

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 ICAO: International Civil Aviation Organization
 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
 IATA: International Air Transport Association
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent

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

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