

Safety Data Sheet

Revision number: E
Date of revision: May 1, 2018

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

1.1	Product identifier	Aluminium paste BP-6360
1.2	Relevant identified uses of the substance or mixture and uses advised against	Use as pigment for paints / inks / coatings only.
1.3	Manufacturer	Toyo Aluminium K.K.
	Represented in the EC	Toyal Europe S.A.S.U. Usine du Pont-du- Roy, Route de Lescun, 64490 Accous, France TEL: +33 (0)5 59 983 535, FAX: +33 (0)5 59 983 536
1.4	Emergency Phones	+33 (0)5 59 983 556 (Toyal Europe S.A.S.U. Accous FR) Available 9:00 – 17:00 hours normal business days local time ORFILA number: +33(0) 1 45 42 59 59

2. Hazards identification

2.1	Classification of the substance or mixture	Classification according to Regulation EC 1272/2008 (CLP) Flam Solid 1 H228 Flammable solid Skin Irrit2 H315 Causes skin irritation. STOT SE3 H336 May cause drowsiness or dizziness. Aquatic Chronic2 H411 Toxic to aquatic life with long lasting effects.
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2.2 Label elements

Label In Accordance With (EC) No.1272/2008



Danger

Hazard statements

H228 Flammable solid
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P262 Do not get in eyes, on skin, or on clothing.
P271 Use only outdoors or in a well-ventilated area.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P331 Do NOT induce vomiting.
P332+P313-If skin irritation occurs: Get medical advice/attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with applicable regulations.

2.3 Other hazards

PBT and vPvB Substances: None

3. Product composition / information

3.1 Substances Not relevant
3.2 Mixtures

Chemical Name (Reach Number)	Composition (WT%)	CAS No.	EC No.	INDEX No.	Classification (EC 1272/2008)
Aluminium powder (stabilized) (01-2119529243-45-XX XX)	46.5-50.0	7429-90-5	231-072-3	013-002-00-1	Flam Sol 1, H228 Water-react 2, H261
Oleic acid*	0-1	112-80-1	204-007-1	NC	NC
Kerosine (petroleum), hydrodesulfurized (01-2119462828-25-XX XX)	42.0-47.0	64742-81-0	265-184-9	649-423-00-8	Flam Liq 3, H226 Skin Irrit 2, H315 STOT SE3, H336 Asp Tox 1, H304 Aquatic Chronic2, H411
Acrylic acid-styrene copolymer**	5.5-7.5	25085-34-1	Polymer	NC	NC

*Not registered on REACH: Annex V

** Not registered on REACH: Polymer

4. First-aid measures

4.1 Description of first aid measures

General notes: In case of persisting adverse effects, consult a physician.
Remove contaminated clothing and shoes immediately and launder thoroughly before reuse.

Inhalation: Move victim to fresh air and keep at rest and get medical attention.

Skin contact: Remove contaminated clothing/shoes, wash contaminated area with clean running water and soap.
If inflammation or pain occurs, get medical attention/advice.

Eye contact: Immediately rinse with plenty of clean running water for 15 minutes or more and get medical attention/advice. Not rub victim's eyes. In the case victim wears contact lenses, remove them if possible.

Ingestion: Not force victim to vomit. If victim is consciousness, firstly rinse mouth with water. If victim feels badly, get medical attention/advice.

Self-protection of the first aider:
In case of inhalation, first aid provider should wear protective mask, in case of skin contact, wear protective equipment such as rubber gloves. Wear protective glasses if necessary.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

No specific recommendations.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable: Powder extinguisher, carbon dioxide gas, dry sand, glass fiber clothing

Unsuitable: Water, extinguishing media containing water, halogen extinguishing media

5.2 Special hazards arising from the substance or mixture

May generate irritative and/or toxic gas by fire.

Burn if intensively heated.

May cause extremely dangerous explosion especially in closed environment (building, ware house etc.)

Package may explode by heat.

Dust or fume may form explosive mixture gas with air.

May ignite by friction, heat, spark or flame.

5.3 Advice for fire-fighters

Use powder extinguisher or carbon dioxide gas at early stage of fire where only solvent is burning. At the final stage of fire, aluminum powder will ignite and burn with white light with releasing large heat. Try smothering extinguishment by covering the origin of fire by dry sand, glass cloth at this stage of fire. Continue smothering extinguishment until aluminum get cold because inside may be still burning without flame even when it seems to be extinguished.

Treat or transport burned aluminum powder after confirming the inside temperature did not rise

after one day.

Product that is not burning should be removed promptly to safe place.

6. Accidental release measures

6.1 **Personal precautions, protective equipment and emergency procedures**

Wear appropriate protective equipment (see 8. Exposure control/personal protection) and avoid contact with eye/skin and inhalation of gas/dust. If in doors, adequately ventilate until processing is complete.

Avoid flowing into drainage, sewage or the basement and other closed places.

6.2 **Environmental precautions**

Do not release leakage to river or sewage directly.

6.3 **Methods and materials for containment and cleaning up**

Stop leakage, if safe to do so. When leaked from the package wipe with cloth (waste cloth) and store in sealed package where no water, acid or alkali exists. Dispose of as industrial waste.

Use equipment that do not cause spark.

6.4 **Prevention of secondary disaster**

Refer to '8. EXPOSURE CONTROLS/PERSONAL PROTECTION.'

7. Handling and storage

7.1 **Precautions for safe handling**

Install equipment described in '8. EXPOSURE CONTROLS/PERSONAL PROTECTION' for local exhaust/total ventilation.

Do not handle until all the safety precautions have been read and understood.

Prohibit using high temperature material, spark or fire in surrounding area.

Do not eat, drink or smoke when using this product.

Wash the hands thoroughly after handling.

Avoid swallow and contact with skin.

Use only outdoors or in a well-ventilated area.

Do not breathe dust, fume, gas, mist, vapor, spray.

Install ventilation for exhaust to keep the concentration in the air below the exposure limit.

Avoid release to the environment.

In case package swells by abnormal inner pressure:

-Package with degassing bulb on lid;

Loosen the bulb gradually. Open after reducing pressure to the atmosphere pressure.

-Package without degassing bulb on lid;

Hold the lid so that it will not fly and decrease pressure by gradually loosening handle lever and open.

7.2 **Conditions for safe storage, including any incompatibilities**

In the store room, install the day lighting, lighting, and ventilating equipment needed for storing or handling the product.

Apply the fireproof structure to walls, pillars and floors of the storage room. Use noncombustible material for beams.

For floors of the storage room, apply a structure that prevents water influx/infiltration.

Store away from ignition sources such as heat, spark or fire.-No smoking.

Store away from oxidizing agent.

Store in sealed container at fixed place where protection from light and ventilation are adequate and temperature (40) and humidity are appropriate.

7.3 **Specific end use(s)** None in particular

8. Exposure controls/personal protection

8.1 Control parameters

Aluminium

TLV (ACGIH)	1mg/m ³ (respirable fraction)
PEL (OSHA)	15mg/m ³ (total dust)
	5mg/m ³ (respirable fraction)
VME	10mg/m ³ (metal)
	5mg/m ³ (powder)
OEL (F)	LTE : 10mg/m ³ (inhalable aerosol)
OEL (F)	LTE : 5mg/m ³ (respirable aerosol)
OEL (DFG)	LTE : 4mg/m ³ (inhalable aerosol)
OEL (DFG)	LTE : 1.5mg/m ³ (respirable aerosol)
OEL (UK)	LTE : 10mg/m ³ (inhalable aerosol)
OEL (UK)	LTE : 4mg/m ³ (respirable aerosol)

Kerosine (petroleum), hydrodesulfurized

TLV (ACGIH)	100ppm
PEL (OSHA)	500ppm
OEL (Belgium)	LTE : 200mg/m ³

8.2 Exposure controls

Engineering controls:

Use explosion-proof electrical/ventilating/lighting equipment.
When dust/fume/mist/gas is generated at high temperature install ventilation equipment to keep concentration of air pollutant below administrative level/acceptable concentration limit.
Handle in the place where total ventilation is installed.
General proper ventilation is good for control the concentration in the air.

Personal protective equipment:

Respiratory organ: In case ventilation is not adequate, wear appropriate respiratory protection.
Use personal respiratory protective equipment as required.

Hand: Use personal protective gloves as required.

Eye: Wear appropriate eye protection.

Skin and body: Wear appropriate face protection.
Use personal antistatic protective clothing and protective mask as required.

Environmental exposure controls: Not available.

9. Physical and chemical properties

9.1 Information and chemical properties

Appearance	Silver-white solid (paste)
Odour	Petroleum
Odour threshold	N.A.
Ph	N.A.
Melting point/freezing point	N.A.
Initial boiling point and boiling range	130 °C (Kerosine (petroleum), hydrodesulfurized)
Flash point	40-45 °C (Kerosine (petroleum), hydrodesulfurized)
Evaporation rate	N.A.
Flammability	UN Class 4.1
Flamm. or expl. Limits	lower:4.9% upper: 0.8% (Kerosine (petroleum), hydrodesulfurized)
Vapour pressure	ca. 5 mmHg at 20 °C (Kerosine (petroleum), hydrodesulfurized)
Vapour density	N.A.
Relative density	1.2 (calculated)
Solubility	Insoluble
Partition coefficient: n-octanol/water	N.A.
Auto-ignition temp.	Ca. 245 °C (Kerosine (petroleum), hydrodesulfurized)
Decomposition temp.	N.A.
Viscosity	N.A.
Explosive Properties	N.A.
Oxidising Properties	N.A.

* This product is not classified to H261 by internal test.

(Test: N5 Transport of dangerous goods- Manual of Tests and Criteria)

*This product is not classified to H304 by ASTM D 4359-90.

10. Stability and reactivity

- 10.1 Reactivity** Stable under normal conditions.
- 10.2 Chemical stability** Stable in air or under light shielded condition.
- 10.3 Possibility of hazardous reactions**
React with water, acid, alkali, oxidizing agent metal oxide, halogen compound and generate hydrogen gas.
Heat accelerates the reaction. Sealed container elevates inner pressure and may burst or the content may blow out and it is especially dangerous.
- 10.4 Conditions to avoid**
Organic solvent in the product may evaporate when temperature is elevated. Avoid contact with flame, spark, high temperature material and heating.
- 10.5 Incompatible materials**
Avoid contact with water, acid, alkali, oxidizing agent (peroxide, sulfuric acids etc), metal oxides (iron oxide etc.), and halogen compounds (chlorine carbon hydrides.)
- 10.6 Hazardous decomposition products**
May generate hydrogen gas.

11. Toxicological information

11.1 Information on toxicological effects

Toxicological information of the mixture:

H315 Category 2 is more than 10% and classified as Category 2.

H336 Category 3 (drowsiness or dizziness) is more than 20% and classified as Category 3.

Toxicological information on the main components of this product;

Kerosine (petroleum), hydrodesulfurized

LD50 (Oral) Rat >5000mg/kg

LD50 (Inhalation) Rat >5.28mg/l

LD50 (Dermal) Rabbit >2000mg/kg

12. Ecological information

- 12.1 Toxicity**
Kerosine (petroleum), hydrodesulfurized
LC50 Crustaceans 48H 0.42-2.3mg/L
- 12.2 Persistence and degradability**
No information at this point.
- 12.3 Bio accumulative potential**
No information at this point.
- 12.4 Mobility in soil**
No information at this point.
- 12.5 Results of PBT and vPvB assessment**
PBT and vPvB Substances: None
- 12.6 Other adverse effects**
No information at this point.

13. Disposal considerations

13.1 Waste treatment methods

Waste to be treated as controlled waste.

Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.

14 . Transport information



- 14.1 UN number**
ADR: 1325
IATA: 1325
IMDG: 1325
- 14.2 UN proper shipping name**
ADR: Flammable solid, organic, N.O.S.
(Aluminium Powder and Petroleum Mixture)
IATA: Flammable solid, organic, N.O.S.
(Aluminium Powder and Petroleum Mixture)
IMDG: Flammable solid, organic, N.O.S.
(Aluminium Powder and Petroleum Mixture)
- 14.3 Transport hazardous class (es)**
ADR: 4 / Hazard identification number: 40
IATA: 4
IMDG: 4
- 14.4 Packing group**
ADR: II
IATA: II
IMDG: II
- 14.5 Environmental hazards**
ADR: Environmental Pollutant
IMDG Marine pollutant:
- 14.6 Special Precaution for User**
ADR-Tunnel restriction code: (E)
IMDG-EMS: F-G, S-G
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**
Not applicable

15 . Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
Directives 98/24/EC (Risks related to chemical agents at work)
Directives 2000/39/EC (Occupational exposure limit values)
Where applicable, refer to the following regulatory provisions:
Directives 2003/105/CE ('Activities linked to risks of serious accidents') and subsequent amendments.
Regulation (EC) nr 648/2004 (detergents.)
1999/13/EC (VOC directive.)
Seveso category: 7a (CAS.7429-90-5)
- 15.2** Chemical Safety Assessment: None



16 .Other information

Full text of phrases referred to in Section3.

H226	Flammable liquid
H228	Flammable solid
H261	In contact with water releases flammable gases
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects

Main bibliographic sources

Annex VI of Regulation 1272/2008

EAPA European Aluminium Particulate Association

ECHA European Chemicals Agency

ESIS Existing Chemical Substances Information System

Information on Hazardous Chemicals and Occupational Diseases

Revision contents: REACH information was added in Section 3.

Format and contents of SDS prepared and approved by: Quality Assurance Dept., TOYO ALUMINIUM K.K., JAPAN

Disclaimer:

This Safety Data Sheet provides reference information to ensure the safe handling of the product. The descriptions herein are based on the currently available information and data but no guarantee is given for its contents, or the product's physic-chemical properties, risk or hazard. The precautions herein are for normal handling. If you use this product under the special conditions, take safety measures appropriate for the special use and usage.