



SAFETY DATA SHEET

MATERION

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Identification of the substance/preparation	Barium - Titanium Oxide Product		
Version No.	01		
Issue date	01-June-2015		
CAS #	Alloy		
Manufacturer information	Materion Advanced Materials Group 42 Mt. Ebo Road South Brewster, NY 10509		
	United States		
	Supplier Phone	1+845.279.0900	
	Chemtrec	1+703.527.3887	

2. HAZARDS IDENTIFICATION

Physical hazards	Not classified as a physical hazard.
Health hazards	Not classified as a health hazard.
Environmental hazards	Not classified as an environmental hazard.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS #	Percent	EC-No.	Classification
Barium	7440-39-3	50 - 60	231-149-1	
Titanium dioxide	13463-67-7	40 - 50	236-675-5	

4. FIRST-AID MEASURES

5. FIRE-FIGHTING MEASURES

6. ACCIDENTAL RELEASE MEASURES

7. HANDLING AND STORAGE

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Barium (CAS 7440-39-3)	TWA	0,5 mg/m ³
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m ³

Turkey. MAK (Ordinance No. 1475 on Precautions Required in Workplaces Working with Flammable, Explosive, Dangerous and Harmful Substances, Annexes 1-3 (1973))

Components	Type	Value
Titanium dioxide (CAS 13463-67-7)	MAK	15 mg/m ³

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Additional exposure data Not available.

Personal protective equipment

Skin and body protection Not available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Solid.
Form	Not available.

Colour	Not available.
Odour	Not applicable.
Odour threshold	Not available.
pH	Not available.
Boiling point	1897 °C (3446,6 °F) estimated
Flash point	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapour pressure	1799,87 hPa estimated
Relative density	Not available.
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Viscosity	Not available.
Vapour density	Not available.
Evaporation rate	Not available.
Melting point/freezing point	727 °C (1340,6 °F) estimated
Auto-ignition temperature	Not applicable.
VOC	Not available.
Other data	
Density	3,89 g/cm3 estimated
Specific gravity	3,89 estimated

10. STABILITY AND REACTIVITY

Conditions to avoid	Not available.
Hazardous decomposition products	Not available.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Titanium dioxide (CAS 13463-67-7)

2B Possibly carcinogenic to humans.

12. ECOLOGICAL INFORMATION

Ecotoxicological data

Product		Species	Test results
Barium - Titanium Oxide Product			
Aquatic			
Crustacea	EC50	Daphnia	2222,2222 mg/l, 48 hours estimated
Fish	LC50	Fish	645,1613 mg/l, 96 hours estimated
Components			
Barium (CAS 7440-39-3)			
Aquatic			
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	> 500 mg/l, 96 hours
Titanium dioxide (CAS 13463-67-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours

13. DISPOSAL CONSIDERATIONS

14. TRANSPORT INFORMATION

ADR

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. REGULATORY INFORMATION

Labeling

Contains	Barium, Titanium dioxide
R-phrase(s)	None.
S-phrase(s)	None.

16. OTHER INFORMATION