

MATERIAL SAFETY DATA SHEET

SAPPHIRE OPTICAL CRYSTAL

1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

CHEMICAL NAME:	Sapphire
SYNONYMS, TRADE NAMES:	Al ₂ O ₃ ; Aluminium Oxide; Alumina; Corundum
DESCRIPTION:	Inorganic Crystalline pieces
USAGE:	Optical Material
APPEARANCE:	Clear transparent solid. No odour
SUPPLIER:	Meco Technology Limited, Unit C, 14/F., Yun Tat Commercial Bldg., 70-74 Wuhu Street, Hung Ham, Kowloon, Hong Kong

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT NAME	CAS No.	%	CLASS	HEALTH	RISK	UN No.
Sapphire	1344-28-1	99.995%	NR	NR	None	NR

3. HAZARDS INFORMATION

Not classified as dangerous according to EC directives

4. FIRST AID MEASURES

GENERAL:	Consult a Physician for specific advice
EYES:	Irrigate thoroughly with water. If discomfort persists obtain medical attention.
SKIN:	Wash off thoroughly with soap and water.
INHALATION:	Remove from exposure. Seek medical advice.
INGESTION:	Wash out mouth thoroughly with water. In severe cases obtain Medical Attention.

5. FIRE FIGHTING MEASURES

FLASH POINT:	Not Ignitable. Not Applicable
AUTO IGNITION TEMP:	Not Applicable
EXTINGUISHING MEDIA:	No specific agents recommended.
UNUSUAL FIRE HAZARDS:	None known.

6. ACCIDENTAL RELEASE MEASURES

CONTAMINATION CLEANUP: Wear suitable protective clothing & equipment as listed under Exposure / Personal protection. Take up and containerize and return to manufacturer for proper disposal. Avoid making dust.

7. HANDLING AND STORAGE

USAGE PRECAUTIONS:	Protect against physical damage. Avoid generating dust.
STORAGE PRECAUTIONS:	No special precautions needed.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Protective gloves made of polyvinyl alcohol (PVA) are required. Use of a laboratory coat is suggested. Safety goggles or safety glasses with side shields are required if there is any possibility of chipping or dust creation. Respirators must be worn when the threshold limit is exceeded. Provide adequate general mechanical ventilation, and local exhaust ventilation.

EXPOSURE LIMITS OES, 10mg/M³, Long-term 8 hour TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear glassy geometric shapes, no odour.
pH IN AQUEOUS SOLUTION:	Not determined
BOILING POINT (760mm Hg):	2977 °C
MELTING POINT:	2053 °C
FLASH POINT:	Not Applicable
FLAMMABILITY:	Not Applicable
EXPLOSIVE PROPERTIES:	Not Applicable
SPECIFIC GRAVITY:	3.97 g/cc
VAPOUR PRESSURE:	1mm Hg @ 2158 °C
SOLUBILITY IN WATER:	98 x 10 ⁻⁶ g/100g

10. STABILITY AND REACTIVITY

STABILITY:	Stable under normal conditions of storage and use.
HAZARDOUS DECOMPOSITION:	Should not occur under normal conditions.
MATERIALS TO AVOID:	Ethylene Oxide, Chlorine Trifluoride

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11. TOXICOLOGICAL INFORMATION

TOXIC DOSE - LD50	No Data
CARCINOGENICITY	No evidence of carcinogenic properties.
MUTAGENICITY/TERATOGENICITY	No evidence of effects.
TOXICOLOGICAL FINDINGS	No Data

12. ECOLOGICAL INFORMATION

No environmental hazard is anticipated provided that the material is handled and disposed of with due care and attention.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: Chemical residues are generally classified as special waste, and as such are covered by regulations which vary according to location.
Contact your local waste disposal authority for advice, or pass to a chemical disposal company.

14. TRANSPORT INFORMATION

Not subject to transport regulations

15. REGULATORY INFORMATION

CLASSIFICATION: Not classified as dangerous according to EC Directives. EC-No.:
LABEL FOR SUPPLY: None

RISK PHRASES: None
SAFETY PHRASES: None

16. OTHER INFORMATION

REVISION DATE: January, 2013

The above information is believed to be correct but does not purport to be all inclusive and must be used only as a guide.