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MATERIAL SAFETY DATA SHEET

Ref: MSDS-048
Date: 24/11/09
Issue: 1
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INDIUM TIN OXIDE

1. PRODUCT AND COMPANY INFORMATION

Substance identification: Indium tin oxide, $\text{In}_2\text{O}_3 - \text{SnO}_2$

Company identification: Keeling & Walker Limited,
Whieldon Road,
Stoke-on-Trent,
ST4 4JA, ENGLAND.

Emergency contact number: +44 1782 744136

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2. HAZARDS IDENTIFICATION

Irritating to eyes, respiratory system and skin.

Hazard symbol: Xi Irritant

3. COMPOSITION / INFORMATION ON INGREDIENTS

Indium trioxide, In_2O_3	90%
Tin (IV) oxide, SnO_2	10%

Chemical Abstract Numbers:	CAS	18282-10-5 / 1312-43-2
European Inventory Numbers:	EINECS	242-159-0 / 215-193-9

4. FIRST AID MEASURES

Inhalation: Remove from exposure to fresh air. If not breathing give artificial respiration.

Ingestion: Wash out mouth thoroughly with water. Seek medical attention.

Eye contact: Flush eyes with copious amounts of water. If discomfort persists seek medical attention.

Skin contact: Wash off skin thoroughly with soap and water. Remove contaminated clothing and wash before re-use.

INDIUM TIN OXIDE

5. FIRE-FIGHTING MEASURES

Not considered to be a fire hazard

Suitable extinguishing media: Any

Exposure hazards: None known

Protective equipment for fire-fighters: Use self-contained breathing apparatus

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Do not breathe dust. Wear personal protective equipment. Ensure adequate ventilation.

Environmental precautions: Do not let product enter drains.

Neutralising chemicals: Not required.

Method of clean-up: Vacuum cleaner or wet-sweeping. Avoid creating dust.

7. HANDLING AND STORAGE

Precautions during handling: Use local exhaust ventilation or adequate respiratory protective equipment. Avoid contact with skin and eyes.

Storage and packaging: Store in tightly sealed containers in a dry, well ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Inhalation: Occupational Exposure Limits (EH40/2005):

Indium oxide: 0.1 mg.m⁻³ (as In) 8 hour time weighted average

0.3 mg.m⁻³ (as In) short term exposure limit

Tin oxide: 2mg.m⁻³ (as Sn) 8 hour time weighted average

4mg.m⁻³ (as Sn) short term exposure limit

Protective measures: Use local exhaust ventilation or adequate respiratory protective equipment to maintain exposure below the Occupational Exposure Limits given above.

INDIUM DOPED TIN OXIDE

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellow or yellow-green powder

Odour: No odour

Specific gravity: Approximately 7.0-7.2

Solubility in water: Insoluble

Flammability: Non-flammable

Melting point: In excess of 1000°C

Boiling point: No information

Vapour pressure: No information

10. STABILITY AND REACTIVITY

Conditions to avoid: None known

Materials to avoid: Not established

Hazardous decomposition products: None known

11. TOXICOLOGICAL INFORMATION

Inhalation: May be harmful if inhaled

Ingestion: May be harmful if swallowed

Skin: May cause skin irritation

Eyes: May cause eye irritation

Signs and symptoms of exposure:

To the best of our knowledge the chemical, physical and toxicological properties of indium tin oxide have not been fully investigated.

12. ECOLOGICAL INFORMATION

Environmental effect: Insoluble in water, stable and inert under normal environmental conditions

INDIUM TIN OXIDE

13. DISPOSAL CONSIDERATIONS

Disposal of product: According to official regulations

Disposal of packaging: According to official regulations

14. TRANSPORT INFORMATION

Not regulated.

15. REGULATORY INFORMATION

Risk Phrases: R36/37/38 Irritating to eyes, respiratory system and skin

Safety Phrases: S22 Do not breathe dust.
S24/25 Avoid contact with skin and eyes

Classification Symbol: Xi Irritant

16. OTHER INFORMATION

HMSO Publication: EH40/2005 Occupational Exposure Limits

The information given is based on our present state of knowledge and does not represent a guarantee of any product characteristics.
