







## MATERIAL SAFETY DATA SHEET

<b>Product Name</b>	<b>SYN-O-AD 8485</b>	
<b>Product id</b>	7064	
<b>Revision date</b>	08/12/2008	<b>Revision: 1</b>

**Methods for cleaning up**      Soak up with sand or other suitable absorbant and dispose of as solid waste  
 Collect in suitable and properly labeled containers.  
 Ventilate area and wash spill site after material pickup is complete.

**Environmental precautions**      Prevent product from entering drains, ditches and rivers

### 7. Handling and storage

**Handling**      Avoid bodily contact. Keep containers tightly closed.

**Storage**      Store in a dry, cool, well-ventilated area away from incompatible materials (see "materials to avoid").  
 Maximum recommended storage temperature of 65°C (149°F)  
 Crystallizes at temperatures below 4.4°C (40°F).

### 8. Exposure controls / personal protection

**Exposure Limits :**

Components	ACGIH-TLV Data	OSHA (PEL) Data
t-Butylphenyl diphenyl phosphate 56803-37-3	Not determined	Not determined
Bis(t-butylphenyl)phenyl phosphate 65652-41-7	Not determined	Not determined
Tri(t-butylphenyl) phosphate 78-33-1	Not determined	Not determined
Triphenyl phosphate 115-86-6	3 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>

**Ventilation requirements**      Ventilation must be sufficient to maintain atmospheric concentration below recommended exposure limit

**Personal protective equipment:**

- Respiratory protection      In case of insufficient ventilation wear suitable respiratory equipment
- Hand protection      Protective gloves
- Eye protection      Chemical safety goggles
- Skin and body protection      Body covering clothes and boots



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**Hygiene measures** Safety shower and eye bath should be provided. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

### 9. Physical and chemical properties

**Appearance** Clear, transparent liquid  
**Odor** Slight  
**Melting point/range** Not determined  
**Boiling point/range** >352°C (decomposes)  
**Pour point** -26.11°C (-15 °F)  
**Flash point** > 107.22°C (> 225°F) (closed cup)  
**Flammable/Explosion limits** Not explosive/Not flammable  
**Auto-ignition temperature** Not self-ignitable  
**Vapour pressure** 0.24 mmHg (20°C)  
**Viscosity** 77 mPas (25°C)  
**Solubility:**  
- Solubility in water 2.7ug/ml at 20°C  
**Specific gravity** 1.182(20°C)

### 10. Stability and reactivity

**Stability** Stable under normal conditions  
**Materials to avoid** Strong oxidizers, strong acids and strong alkalis.  
It hydrolyzes slowly at normal temperatures in acidic or alkaline aqueous solutions  
**Conditions to avoid** Exposure to moisture  
**Hazardous decomposition products** Carbon dioxide and carbon monoxide  
Phosphorus oxides  
**Hazardous polymerization** Not expected to occur





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### 12. Ecological information

- Hydrolysis                      Hydrolysis rates for triphenyl phosphate, a product component are:  
                                          at pH 9.5: half-life: 0.23 days  
                                          at pH 8.2: half-life: 7.5 days

Biodegradation                 Readily biodegradable

Bioaccumulative potential     Triaryl phosphate esters, including triphenyl phosphate, exhibit low aqueous solubility, have moderate potential for bioconcentration and readily undergo biodegradation.

Germany, water endangering classes (WGK)     2

### 13. Disposal considerations

Waste disposal                 Observe all federal, state and local environmental regulations when disposing of this material

### 14. Transportation information

UN No.                         3082

DOT                             Proper shipping name: Environmentally hazardous substance, liquid, n.o.s (triphenyl phosphate, tert-butylated triphenyl phosphate mixtures containing 10% to 48% triphenyl phosphates)  
                                          Class: 9 - Miscellaneous Hazardous Material  
                                          Label: 9  
                                          Packing Group: III

                                          Not regulated for surface and air transport in non-bulk (<119 gallons) packagings. (contains triphenyl phosphate which is a Marine Pollutant per 49CFR 172.101 Appendix B)

IMO                             Proper shipping name: Environmentally hazardous substance, liquid, n.o.s (triphenyl phosphate, tert-butylated triphenyl phosphate mixtures containing 10% to 48% triphenyl phosphates)  
                                          Class: 9 - Miscellaneous Dangerous Substances and articles  
                                          Label: 9  
                                          Marking: MARINE POLLUTANT (PP)  
                                          Packing Group: III





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New Zealand Inventory	Listed in NZIoC
China inventory	Listed
Korea	Listed in ECL
Philippines	Listed in PICCS



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### 16. Other information

#### Health, Safety & Environment Policy

We will strive to ensure that our operations and products meet the needs of the present global community without compromising the ability of future generations to meet their needs

We accept that the success of our business is dependent on the supply of products and services that will benefit society whilst ensuring human safety and protection of the environment and natural resources

Within the framework of our commitment to the Responsible Care program, we will provide a healthy and safe work environment for employees and will responsibly manage our products at all stages of their life cycle in order to protect human health and the environment whilst maintaining high production standards of operation

#### TO MEET THIS COMMITMENT WE WILL:

Comply with or exceed applicable national and international regulatory requirements and other requirements to which we subscribe

Communicate openly and actively encourage dialogue with employees, customers and community concerning our products and operations

Implement documented management systems consistent with and for promotion of the Responsible Care ethics

Develop and supply products that can be manufactured, transported, used and disposed of safely whilst best meeting the needs of our customers

Regularly assess, continually improve and responsibly manage health, safety and environmental risks associated with products and processes throughout their life-cycles

Share knowledge and expertise with others and seek to learn from and incorporate improved practices into our own operations

Educate and train employees, contractors and customers to improve their HSE performance

Communicate up-to-date information to enable our workers, customers and other interested parties to handle our products in a safe and environmentally responsible manner

Endeavor to work with customers, suppliers, distributors and contractors to foster the safe use, transport and disposal of our chemicals

Support Product Stewardship programs in cooperation with customers, distributors and transporters

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, Bromine Compounds Ltd. makes no representations as to the completeness or accuracy thereof.

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**End of safety data sheet**