1 PRODUCT AND COMPANY IDENTIFICATION

Functional Additives
2000 Market Street
21st Floor
Philadelphia, PA 19103-3222

EMERGENCY PHONE NUMBERS:
Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 767-5089 (24Hrs)

Information Telephone Numbers	Phone Number	Available Hrs
Customer Service Number	(800) 331-7654	8:00 AM - 5:00 PM EST

Product Name	FASCAT (R) 9201 Catalyst
Product Synonym(s)	
Chemical Family	Organotins
Chemical Formula	(C4H9)2SnO
Chemical Name	Di-n-butyl-oxo-stannane
EPA Reg Num	
Product Use	Catalyst

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Dibutyltin oxide	818-08-6	> 97	Y

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview

White powder with no characteristic odor.

WARNING!
HARMFUL IF SWALLOWED.
MAY CAUSE EYE IRRITATION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
MAY FORM COMBUSTIBLE DUST-AIR MIXTURES.

Potential Health Effects

Skin contact and inhalation are expected to be the primary routes of occupational exposure to this material. Based on single exposure animal tests, it is considered to be moderately to slightly toxic if swallowed, no more than slightly toxic if absorbed through skin, slightly irritating to skin and moderately irritating to eyes. A number of other organotin compounds have been shown to cause upper respiratory tract irritation, suggesting precautions against exposure to this material.

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water. Get medical attention if irritation persists.

IN CASE OF CONTACT, flush the area with plenty of water. Remove material from clothing. Wash clothing before reuse.

IF INHALED, remove to fresh air. If breathing is difficult, get medical attention.

IF SWALLOWED, induce vomiting immediately as directed by medical personnel. Get medical attention. Call a Poison Control Center. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature	140 C	
Flash Point	NE	Flash Point Method
Flammable Limits- Upper	NE	
Lower	NE	

Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

Fire Fighting Instructions

Do NOT use a solid stream of water. A solid stream of water can cause a dust explosion. Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards

When burned, the following hazardous products of combustion can occur:
Oxides of carbon
Tin oxides
Dust clouds generated during handling and/or storage can form explosive mixtures with air. Dust explosion characteristics vary with the particle size, particle shape, moisture content, contaminants, and other variables.

NOTE: Check that all equipment is properly grounded and installed to satisfy electrical classification requirements. As with any dry material, pouring this material or allowing it to free-fall or be conveyed through chutes or pipes can accumulate and generate electrostatic sparks, potentially causing ignition of the material itself, or any flammable materials which may come into contact with the material or its container.

6 ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Stop the leak, if possible. Ventilate the space involved. Absorb, sweep up, place in container for disposal. Reduce dust spreading with a water spray. Shut off or remove all ignition sources. Prevent waterway contamination. Construct a dike to prevent spreading. Protect workers with water spray. Collect run-off water and transfer to drums or tanks for later disposal. Avoid creating a dusty atmosphere. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

6 ACCIDENTAL RELEASE MEASURES

Clean up procedures: Transfer to containers, preparatory for later disposal. Avoid generation of dusts. Place in non-sparking containers for recovery or disposal. Remove from spill location. Flush area with water spray, collect rinsate.

7 HANDLING AND STORAGE

Handling

Do not taste or swallow.
Avoid contact with eyes, skin and clothing.
Avoid breathing dust.
Wash thoroughly after handling.
Keep container closed.
Use only with adequate ventilation.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.
Prevent dust accumulation.

Storage

This material is not hazardous under normal storage conditions; however, material should be stored in closed containers, in a secure area to prevent container damage and subsequent spillage.
Store in a well ventilated area away from heat and sources of ignition such as flame, sparks and static electricity. Ensure that all storage and handling equipment is properly grounded and installed to satisfy electrical classification requirements. Static electricity may accumulate when transferring material. All storage containers, including drums, cylinders and IBCs, must be bonded and grounded during filling and emptying operations.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Eye / Face Protection

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment available.

Skin Protection

Minimize skin contamination by following good industrial hygiene practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Respiratory Protection

Avoid breathing dust. Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Guidelines for Ingredients

Exposure Limit		Value
Dibutyltin oxide		
ACGIH Skin designator	-	Y
ACGIH STEL	-Organic tin compounds, as Sn	0.2 mg/m3
ACGIH TWA	-Organic tin compounds, as Sn	0.1 mg/m3
ARKEMA 12-hour TWA	-Mono- and dibutyl tin compounds, as Sn	0.07 mg/m3
OSHA TWA PEL	-Organic tin compounds, as Sn	0.1 mg/m3

-Only those components with exposure limits are printed in this section.
-Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.
-ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.
-WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	White powder with no characteristic odor.
pH	NE
Specific Gravity	NA
Vapor Pressure	NE
Vapor Density	NE
Melting Point	Decomposes @ 140 C
Freezing Point	NE
Boiling Point	NE
Solubility In Water	Insoluble
Molecular Weight	248.9 g/mole

10 STABILITY AND REACTIVITY

Stability

This material is chemically stable under normal and anticipated storage and handling conditions. However, avoid flames, welding arcs, potential ignition sources, or other high temperature sources which induce thermal decomposition.

Hazardous Polymerization

Does not occur.

Incompatibility

Avoid exposure to elevated temperatures (>140 C), as product will decompose.

Hazardous Decomposition Products

Upon thermal decomposition, the following products may be released:
Oxides of Carbon
Tin Oxides

11 TOXICOLOGICAL INFORMATION

Toxicological Information

Data on this material and/or its components are summarized below.

Single exposure (acute) studies indicate:
Oral - Moderately to Slightly Toxic to Rats (LD50 172 to >487 mg/kg)
Dermal - No More than Slightly Toxic to Rabbits (LD50 >2,000 mg/kg)
Skin Irritation - Slightly Irritating to Rabbits (4-hr exposure, 2.3/8.0)
Eye Irritation - Moderately Irritating to Rabbits (18/110)

Following repeated oral administration, liver and kidney effects were noted in rats. Birth defects in the absence of maternal toxicity were noted in the offspring of rats orally exposed during pregnancy. No genetic changes were seen in studies with bacteria but a similar material produced both positive and negative results in studies with whole animals.

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

Data on this material and/or its components are summarized below.

This material is no more than moderately toxic to red killifish (48-hr LC50 1 ppm), zebrafish (96-hr LC50 >3.10 mg/l), Daphnia magna (48-hr EC50 1.5 mg/l) and algae (72-hr EC50 >1.6 mg/l).

Chemical Fate Information

Data on this material and/or its components are summarized below.

Dibutyltin has a half life of 3-15 days in water.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Incineration is the recommended method for disposal observing all local, state and federal regulations.

14 TRANSPORT INFORMATION

DOT Name	Not Regulated by DOT
DOT Technical Name	
DOT Hazard Class	
UN Number	
DOT Packing Group	PG
RQ	

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	Y	Fire	N
Delayed (Chronic) Health	N	Reactive	N
		Sudden Release of Pressure	N

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

SARA Reportable Quantities	CERCLA RQ	SARA TPQ
Dibutyltin oxide	NE	

New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Dibutyltin oxide

16 OTHER INFORMATION

Revision Information

Revision Date	23 JAN 2008	Revision Number 12
Supercedes Revision Dated	02-JAN-2007	

Revision Summary

Update DOT

Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark

FASCAT is a registered trademark of Arkema Inc.