



# FASCAT (R) 4351 Catalyst

Material Safety Data Sheet

Arkema Inc.

## 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) 4351 Catalyst  
Product Synonym(s)

Chemical Family Organotin compound  
Chemical Formula (C5H5) 3SnOH  
Chemical Name Triphenyltin Hydroxide  
EPA Reg Num NA  
Product Use Curing catalyst

## 2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Triphenyltin hydroxide	76-87-9	> 96	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)

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

## 3 HAZARDS IDENTIFICATION

### Emergency Overview

Fine, white powder with a characteristic odor.

#### DANGER!

MAY BE FATAL IF INHALED.

MAY BE FATAL IF ABSORBED THROUGH SKIN.

HARMFUL IF SWALLOWED.

CAUSES EYE IRRITATION.

CAUSES LIVER DAMAGE MAY CAUSE SKIN IRRITATION.

MAY CAUSE PITUITARY AND IMMUNE SYSTEM EFFECTS BASED ON ANIMAL DATA

### Potential Health Effects

Inhalation and skin contact 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 toxic if swallowed, highly toxic if absorbed through skin or inhaled and severely irritating to eyes. Direct contact with skin may cause moderate irritation with immediate or delayed symptoms. Overexposure to dust may result in absorption through the skin and lungs causing headache, gastrointestinal disturbances, diarrhea, blurred vision, hyperglycemia and liver damage. Animal studies with this material have shown that repeated administration can cause adverse effects on the pituitary, liver and immune system.

**4 FIRST AID MEASURES**

IN CASE OF CONTACT, Get medical attention. Call a Poison Control Center. immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Destroy contaminated shoes.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

IF SWALLOWED, do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

**5 FIRE FIGHTING MEASURES****Fire and Explosive Properties**

Auto-Ignition Temperature	NE	
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**

Contain run-off from fire. 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: Carbon monoxide Carbon dioxide Tin oxides Avoid breathing fumes from fire exposed material.

**6 ACCIDENTAL RELEASE MEASURES****In Case of Spill or Leak**

Stop the leak, if possible. Shut off or remove all ignition sources.  
Ventilate the space involved. Avoid generation of vapors.  
Prevent waterway contamination. Construct a dike to prevent spreading.  
Use non-sparking equipment to clean up spill.  
Absorb, sweep up, place in appropriate containers for recovery or disposal.  
Collect run-off water and transfer to drums or tanks for later disposal.  
After removal, clean area with soap and water, collect rinsate. Remove from spill location.  
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.

**7 HANDLING AND STORAGE****Handling**

Do not get in eyes, on skin or on clothing. Do not breathe dust. Do not taste or swallow. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

## 7 HANDLING AND STORAGE

### 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. It is recommended that containers be raised above floor or ground during extended storage periods to prevent container corrosion due to standing water. Avoid temperature extremes during storage; ambient temperature preferred.

## 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. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. 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. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

### Eye / Face Protection

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

### Skin Protection

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear chemical goggles, a face shield, and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Remove contaminated clothing promptly and wash before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash 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. 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.

### Airborne Exposure Guidelines for Ingredients

Exposure Limit		Value
<b>Triphenyltin hydroxide</b>		
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
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	Fine, white powder with a characteristic odor.
pH	NE
Specific Gravity	1.016
Vapor Pressure	NE
Vapor Density	NE
Melting Point	118-122 deg C
Freezing Point	
Boiling Point	NE
Solubility In Water	Insoluble
Solubility in Other Materials	NE
Evaporation Rate	NE
Particle Size	NE
Percent Volatile	<1
Molecular Weight	330.86
n-Octanol/Water Partition Coefficient	NE
Oil/Water Partition Coefficient	NE
Other Physical Data	

**10 STABILITY AND REACTIVITY****Stability**

This material is chemically stable under normal and anticipated storage and handling conditions.

**Hazardous Polymerization**

Does not occur.

**Incompatibility**

Contact with acids and oxidizers may result in a low energy release. Direct sunlight may cause degradation to an inorganic tin salt.

**Hazardous Decomposition Products**

Use of TPTH at elevated temperatures may cause decomposition and formation of benzene.

**11 TOXICOLOGICAL INFORMATION****Toxicological Information**

Single exposure (acute) studies indicate:

Oral - Moderately Toxic to Rats (LD50 156-268 mg/kg)

Dermal - Highly Toxic to Rabbits (LD50 127-159 mg/kg)

Inhalation - Highly Toxic to Rats (LC50 60.3 ug/l)

Skin Irritation - Non-Irritating to Rabbits

Eye Irritation - Severely Irritating to Rabbits

Acute poisoning of workers handling this material has produced headache, gastrointestinal disturbances, diarrhea, blurred vision, hyperglycemia and signs of liver injury including enlarged liver and elevated serum liver enzymes. It has caused skin irritation in patch tests with human volunteers, but did not cause allergic contact dermatitis in workers previously exposed in agricultural operations.

Acute oral administration to rabbits and hamsters showed marked hyperglycemic reactions. No skin allergy was

**11 TOXICOLOGICAL INFORMATION**

reported in guinea pigs following repeated exposure. Repeated administration to rats has been reported to cause decreases in circulating lymphocytes and depression of the cell mediated immune system. In repeat feeding studies, rats and guinea pigs exhibited increased mortality, decreased thymus and spleen weights, and reduction in circulating lymphocytes. Long-term dietary administration produced no tumor formation in rats and mice, but survival was somewhat reduced in male mice. Mice exposed long-term in the diet showed increases in liver tumors and reductions in circulating immunoglobulins. Female rats exposed in the diet long-term showed increased pituitary adenomas, while males showed an increase in testicular tumors, a potential promoting effect. Testicular atrophy, pituitary hyperplasia and liver effects were also observed. Oral administration to pregnant rats resulted in maternal toxicity, increased resorptions and decreased survival, but no birth defects. Repeated dietary administration produced marked depression of weight gain and reduced fertility in rats. Adaptation to dosed feed in the latter part of the study showed a return to normal body weights and normal fertility. At termination following nine months of feeding, no treatment related effects on any organ or tissue were noted. Dermal application during pregnancy resulted in no increased birth defects or toxicity to the offspring. No genetic changes were observed in tests using bacteria, but genetic changes were observed in tests using in animals. Both positive and negative responses have been reported in tests using animal cells.

**12 ECOLOGICAL INFORMATION****Ecotoxicological Information**

This material is highly toxic to rainbow trout, goldfish, fathead minnow, bluegill sunfish, carp, guppies, golden orfe, harlequin fish, and Japanese killifish (LC50 values ranging from <2-120 ug/l). It is also highly toxic to Daphnia pulex (LC50 350 ug/l) and mysid shrimp, sheepshead minnow, and Eastern oysters (LC50 values ranging from 3.7-568 ug/l). It is moderately to highly toxic to green algae and diatoms (LC50 720 and 1200 ug/l, respectively).

**Chemical Fate Information**

No data are available.

**13 DISPOSAL CONSIDERATIONS****Waste Disposal**

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA. This pesticide is toxic to fish. Do not apply directly to water or wetlands. Do not apply directly to water by cleaning of equipment or disposal of wastes. Keep dust and chips generated during paint removal from entering water. Discard paint scrap in an approved landfill. Recover, reclaim or recycle when practical. Dispose of in accordance with federal, state and local regulations.

**14 TRANSPORT INFORMATION**

DOT Name	Organotin pesticide, solid, toxic
DOT Technical Name	(Triphenyltin Hydroxide)
DOT Hazard Class	6.1
UN Number	UN2786
DOT Packing Group	PG II
RQ	NE
Marine Pollutant	This material is classified as a DOT SEVERE MARINE POLLUTANT.

**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	Y	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**

Triphenyltin hydroxide

CERCLA RQ

NE

SARA TPQ

**SARA Title III, Section 313**

This product does contain chemical(s) which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See Section 2

Triphenyltin hydroxide

**California Prop 65 - Carcinogen**

This product does contain the following chemical(s), as indicated below, currently on the California list of Known Carcinogens.

Triphenyltin hydroxide

**California Prop 65 - Developmental Toxin**

This product does contain the following chemical(s), as indicated below, currently on the California List of Developmental Toxins.

Triphenyltin hydroxide

**Massachusetts Right to Know**

This product does contain the following chemical(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Triphenyltin hydroxide

**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.

Triphenyltin hydroxide

**16 OTHER INFORMATION****Revision Information**

Revision Date	20 MAR 2007	Revision Number	8
Supersedes Revision Dated	02-JAN-2007		

**Revision Summary**

Update section 8

**Key**

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

FASCAT is a registered trademark of Arkema Inc.



## **FASCAT (R) 4351 Catalyst**

Material Safety Data Sheet

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