



# FASCAT (R) 4400 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) 4400 CATALYST  
Product Synonym(s)

Chemical Family Inorganic tin  
Chemical Formula SnCl<sub>4</sub>  
Chemical Name NA  
EPA Reg Num NA  
Product Use Catalyst

## 2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Tin tetrachloride	7646-78-8	> 99	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

Colorless to pale yellow liquid with an acrid odor.

DANGER!

CAUSES EYE BURNS. MAY CAUSE BLINDNESS.  
CAUSES SKIN IRRITATION.  
CAUSES RESPIRATORY TRACT IRRITATION.

### Potential Health Effects

Skin contact and inhalation are expected to be the primary routes of occupational exposure to tin tetrachloride. Based on single exposure animal tests, it is considered to be slightly toxic if inhaled and severely irritating to eyes. On contact with moist skin, mucous membranes or atmospheric moisture, this material reacts rapidly to form hydrochloric acid, which may be irritating or even corrosive to eyes, skin and mucous membranes. Prolonged or repeated skin contact may result in dermatitis (inflammation of the skin). Swallowing may result in irritation and injury characterized by pain in the mouth, throat and stomach, difficulty in swallowing, nausea and vomiting, followed by diarrhea and respiratory distress. Long-term inhalation of high concentrations of inorganic tin compounds can result in stannosis, a benign dust-induced lung condition, generally without symptoms of interference with lung function. Medical conditions that may be



aggravated by exposure to this material include lung disease or limited respiratory capacity.

**4 FIRST AID MEASURES**

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

IF ON SKIN, immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

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**

Do NOT use water. Use 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. Ventilate the space involved. Contain, sweep up, place in container for disposal. Shut off or remove all ignition sources. Prevent waterway contamination. Construct a dike to prevent spreading. Collect run-off and transfer to drums or tanks for later disposal. 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.

Clean up procedures: Transfer to containers in preparation for later disposal. Avoid generation of vapors. Place in non-sparking containers for recovery or disposal. Remove from spill location. Decontaminate area.

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

Do not get in eyes, on skin or on clothing. Avoid breathing vapor. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

**7 HANDLING AND STORAGE****Storage**

Upon exposure to direct sunlight, product degradation to an organic tin salt may occur.

**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.

**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. Natural rubber Neoprene Nitrile Gloves should be worn when handling this material. 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 vapor or mist. When airborne exposure limits are exceeded (see below), use NIOSH approved full face respirator with an acid gas cartridge coupled with an N 95 particulate filter (full facepiece recommended). If used, full facepiece replaces need for face shield and/or chemical goggles. Consult respirator manufacturer if exposure levels are greater than ten times the recommended exposure limits. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, 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>Tin tetrachloride</b>		
ACGIH TWA	-Inorganic tin compds., as Sn	2 mg/m <sup>3</sup>
OSHA TWA PEL	-Inorganic tin compds., as Sn	2 mg/m <sup>3</sup>

-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

Colorless to pale yellow liquid with an acrid odor.

pH

NE

Specific Gravity

2.23 @ 20 deg C

Vapor Pressure

18.6 mm Hg @ 20 deg C

Vapor Density

9

Melting Point

-33 deg C

Freezing Point

-33 deg C

Boiling Point

114 deg C

Solubility In Water

Complete; water reactive

Solubility in Other Materials

NE

Evaporation Rate

NE

Particle Size

NE

Percent Volatile

NE

Molecular Weight

260.53

n-Octanol/Water Partition Coefficient

NE

Oil/Water Partition Coefficient

NE

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

This material is chemically unstable and should only be handled under specified conditions. See HANDLING AND STORAGE section of this MSDS for specified conditions.

**Hazardous Polymerization**

Does not occur.

**Incompatibility**

Reacts with atmospheric moisture and will generate heat and release stannic chloride pentahydrate, tin oxide, and hydrogen chloride vapors.

**Hazardous Decomposition Products**

Carbon monoxide, carbon dioxide, stannic chloride pentahydrate and hydrogen chloride can be liberated at high temperatures.

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

Single exposure (acute) studies indicate:

Inhalation - Slightly Toxic to Rats (4-hr LC50 1.4 mg/l)

Eye Irritation - Severely Irritating to Rabbits

No irritation or allergy was reported in human volunteers following exposure of up to 2% in a controlled skin contact study. Decreased spleen weights were reported in rats following repeated oral exposure. No genetic changes were observed in tests using bacteria or animals. Both positive and negative responses were observed in tests using human cells.

**12 ECOLOGICAL INFORMATION**

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

This material is practically non-toxic to zebrafish (96-hr LC50 >1,000 mg/l) and killifish (24-hr LC50 480 mg/l). It is slightly toxic to Daphnia magna (48-hr EC50 21.6 mg/l).

**Chemical Fate Information**

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

This material is not expected to bioaccumulate (log Pow -1.53).

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

Recover, reclaim or recycle when practical. Dispose of in an approved landfill if allowed locally. Comply with federal, state, and local regulations. Dispose of in a permitted waste management facility if incineration or landfill is not practical.

**14 TRANSPORT INFORMATION**

DOT Name	Stannic chloride, anhydrous
DOT Technical Name	NA
DOT Hazard Class	8
UN Number	UN1827
DOT Packing Group	PG II
RQ	NA

**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	Y
		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
Tin tetrachloride	NE	

**Massachusetts Right to Know**

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

Tin tetrachloride

**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.

Tin tetrachloride

**Pennsylvania Right to Know**

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.



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## Pennsylvania Right to Know

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Tin tetrachloride

## 16 OTHER INFORMATION

### Revision Information

Revision Date 02 JAN 2007 Revision Number 9  
Supercedes Revision Dated 02-JAN-2007

### Revision Summary

The name of this business group has changed to Functional Additives.

### Key

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

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