

EMERSON & CUMING SPECIALTY POLYMERS DIV. NATIONAL STARCH -- CATALYST 9 --
5970-00-081-4333

===== Product Identification =====

Product ID:CATALYST 9

MSDS Date:06/25/1997

FSC:5970

NIIN:00-081-4333

Status Code:A

Kit Part:Y

MSDS Number: CKVTY

=== Responsible Party ===

Company Name:EMERSON & CUMING SPECIALTY POLYMERS DIV. NATIONAL STARCH

Address:55 HAYDEN AVE.

City:LEXINGTON

State:MA

ZIP:02173

Country

:US

Info Phone Num:617-828-3300; 617-402-9100SAFETY

Emergency Phone Num:(800)424-9300

Resp. Party Other MSDS Num.:600008

Preparer's Name:DAVID HAAS

Chemtec Ind/Phone:(800)424-9300

CAGE:UO039

=== Contractor Identification ===

Company Name:EMERSON & CUMING SPECIALTY POLYMERS DIV. NATIONAL STARCH

Address:55 HAYDEN AVE.

Box:City:LEXINGTON

State:MA

ZIP:02173

Country:US

Phone:617-828-3300; 617-402-9100SAFETY

Contract Num:SPO411-01-M-G585

CAGE:UO039

Company Name:MCKEOWN ROBERT CO. INC.

Address:111 CHA

MBERS BROOK RD.

Box:City:SOMERVILLE

State:NJ

ZIP:08876

Country:US

Phone:908-218-9000

Contract Num:SP0430-00-M-GC18

CAGE:7B953

Company Name:MCKEOWN ROBERT CO. INC.

Address:111 CHAMBERS BROOK RD.

Box:City:SOMERVILLE

State:NJ

ZIP:08876

Country:US

Phone:908-218-9000

Contract Num:SP0430-01-M-H114

CAGE:7B953

===== Composition/Information on Ingredients =====

H TLV:N/E

Ingred Name:TRIETHYLENETETRAMINE

CAS:112-24-3

RTECS #:YE6650000

Minumum % Wt:20.

Maxumum % Wt:30.

OSHA PEL:N/E

ACGIH TLV:N/E

Ingred Name:PENTAETHYLENE HEXAMINE

CAS:4067-16-7

RTECS #:RZ2680000

= Wt:10.

OSHA PEL:N/E

ACGIH TLV:N/E

===== Hazards Identification =====

LD50 LC50 Mixture:NO DATA PROVIDED BY MANUFACTURER

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:EYES-CORROSIVE, MAY CAUSE BURNS;
POSSIBLE CORNEA

L INJURY, PERMANENT IMPAIRMENT OR BLINDNESS.

SKIN-CORROSIVE, MAY CAUSE SEVERE BURNS, BLISTERING; MAY CAUSE SKIN
SENSITIVITY/ALLERGIC SKIN REACTIONS; MAY BE HARMFUL IF SKIN
ABSORBED. INHALATION-VAPORS MAY CAUSE IRRITATION, NAUSEA,
HEADACHES; MAY CAUSE RESPIRATORY SENSITIZATION. INGESTED-HARMFUL IF
SWALLOWED; MAY CAUSE BURNS TO MOUTH & GI TRACT. CHRONIC: REPERATED
OVEREXPOSURE TO POLYETHYLENE POLYAMINES (INCLUDING ALL THREE LISTED
INGREDIENTS) ARE REPORTED TO CAUSE LI

VER & KIDNEY INJURY IN
LABORATORY ANIMALS.

Explanation of Carcinogenicity:NO DATA PROVIDED BY MANUFACTURER

Effects of Overexposure:EYES-BURNS, BLINDNESS. SKIN-BURNS, BLISTERING.

INHALED-IRRITATION, NAUSEA, HEADACHES, TIGHTNESS IN CHEST,
ASTHMA-LIKE SYMPTOMS, RESPIRATORY DISTRESS. INGESTED-BURNS TO MOUTH
& GI TRACT.

Medical Cond Aggravated by Exposure:NO DATA PROVIDED BY MANUFACTURER

===== First Aid Measures =====

First Aid:EYES-IMMEDIATELY

FLUSH WITH WATER FOR AT LEAST 15 MINUTES,
HOLD LIDS OPEN. GET IMMEDIATE MEDICAL ATTENTION. SKIN-IMMEDIATELY
FLUSH WITH WATER WHILE REMOVING CONTAMINATED CLOTHES & SHOES.
FOLLOW BY WAS HING WITH SOAP & WATER. GET IMMEDIATE MEDICAL
ATTENTION.DO NOT REUSE CONTAIMINATED CLOTHES UNTIL LAUNDERED.
DISCARD CONTAMINATED LEATHER GOODS/SHOES. INHALED-REMOVE VICTIM TO
FRESH AIR. PROVIDE OXYGEN IF BREATHING DIFFICULT. GIVE ARTIFICIAL
RESPIRATION IF NOT BREATHING. GET IMMEDIATE ME
DICAL ATTENTION.
INGESTED-DO NOT INDUCE VOMITING! IF CONSCIOUS, DILUTE BY DRINKING
WATER. GET IMMEDIATE MEDICAL A TTENTION.

===== Fire Fighting Measures =====

Flash Point:>93.3C, 200.F

Lower Limits:NE

Upper Limits:NE

Extinguishing Media:USE CARBON DIOXIDE, DRY CHEMICAL, FOAM, WATER FOG.

Fire Fighting Procedures:FIREFIGHTERS/RESCUE PERSONNEL SHOULD WEAR
POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS AND FULL
PROTECTIVE EQUIPMENT. COOL EXPO

SED CONTAINERS WITH WATER TO PREVENT

PRESSURE BUILDUP. IF LARGE Q UANTITIES OF MATERIAL ARE INVOLVED,
EVACUATE AREA AND FIGHT FIRE FROM A SAFE DISTANCE.

Unusual Fire/Explosion Hazard:DECOMPOSITION AND COMBUSTION PRODUCTS MAY
BE TOXIC. CLOSED CONTAINERS MAY VIOLENTLY RUPTURE UNDER FIRE
CONDITIONS.

===== Accidental Release Measures =====

Spill Release Procedures:ACTIVATE AVAILABLE VENTILATION EQUIPMENT. WIPE
OR ABSORB SPILLED MATERIAL WITH VERMICUL
ITE OR SIMILAR MATERIAL.

WASH AREA WITH SOAPY WATER. COLLECT ABSORBED MATERIAL & WATER
RINSES TO APPROPRIATE CONT AINERS. DISPOSE OF IN ACCORDANCE WITH
CURRENT FEDERAL, STATE & LOCAL REGULATIONS. SPILL RESPONSE
OPERATIONS MUST BE IAW 29 CFR 1910.120. LARGE SPILLS: PREVENT
RUNOFF FROM ENTERING WATERWAYS.

Neutralizing Agent:NO DATA PROVIDED BY MANUFACTURER

===== Handling and Storage =====

Handling and Storage Precautions:STORE IN A COOL, DR

Y LOCATION WITH

ADEQUATE VENTILATION. KEEP CONTAINER TIGHTLY SEALED WHEN NOT IN USE. KEEP AWAY FROM OPEN FLAMES AND HEAT SOURCES. CONSULT PRODUCT TECHNICAL BULLETIN FOR DETAILED STORAGE INFORMATION.

Other Precautions:BECAUSE USAGE CONDITIONS WILL VARY DEPENDING ON CUSTOMER APPLICATION, SPECIFIC SAFE HANDLING PROCEDURES SHOULD BE DEVELOPED BY A PERSON KNOWLEDGEABLE IN THE INTENDED USAGE CONDITIONS AND EQUIPMENT. EMPLOYEES MUST BE TRAINED IN SAFE HANDLING OF THIS PRODUCT PRIOR TO USE.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:USE AN APPROPRIATE PROPERLY FITTED RESPIRATOR IF SYMPTOMS OF EXPOSURE APPEAR. THE TYPE OF RESPIRATORY PROTECTION SELECTED(SCBA, AIR PURIFYING ETC.) WILL DEPEND ON THE CONDITIONS OF USE. OBSERVE OSHA REGULATIONS FOR RESPIRATORY PROTECTION (29 CFR 1910.134).

Ventilation:EFFECTIVE MECHANICAL EXHAUST VENTILATION TO DRAW VAPORS, MISTS, OR FUMES GENERATED DURING PROCESSING AWAY FROM THE WORKER AND TO PREVENT ROUTINE INHALATION.

Protective Gloves:NITRILE GLOVES.

Eye Protection:FACE SHIELD IN CONJUNCTION WITH EITHER CHEMICAL GOGGLES OR SAFETY GLASSES.

Other Protective Equipment:CHEMICAL RESISTANT APRON AND ADDITIONAL IMPERVIOUS CLOTHING TO PREVENT ALL SKIN CONTACT. EYE WASH FACILITIES AND SAFETY SHOWER MUST BE AVAILABLE.

Work Hygienic Practices:NORMAL WORK CLOTHING SHOULD BE WASHED BEFORE RE-USE. WASH HANDS AND FACE THOROUGHLY AFTER HANDLING AND BEFORE EATING, DRINKING OR SMOKING.

Supplemental Safety and Health

IT SHOULD BE NOTED THAT ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT MAY NOT BE SUFFICIENT TO PROTECT PERSONS ALREADY SENSITIZED TO THIS MATERIAL. DLA-HMIS NOTE: PRODUCT IS PART OF 3-PART KIT. OTHER HMIS RECORD FOR THIS KIT/NSN ARE: CKVWB & CKVTW.

===== Physical/Chemical Properties =====

HCC:B2

Boiling Pt:=337.8C, 640.F

Vapor Pres:AIR

Spec Gravity:0.99

VOC Pounds/Gallon:4

41
Solubility in Water:SOLUBLE
Appearance and Odor:AMBER LIQUID, AMINE ODOR
Percent Volatiles by Volume:ND

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES
INCOMPATIBLE WITH STRONG OXIDZERS, ACIDS, BASES, EPOXIDE.
Stability Condition to Avoid:AVOID STORAGE IN OPEN CONTAINERS, EXPOSURE
TO OPEN FLAME OR UNCONTROLLED EXPOSURE TO HEAT, UNCONTROLLED MIXING
WITH EPOXIES OR EXPOSURE TO INCOMPATIBLE SUBSTANCES..
Hazardous Decomposit
ion Products:CARBON MONOXIDE, CARBON DIOXIDE,
OXIDES OF NITROGEN ,AMINES AND OTHER ORGANIC SUBSTANCES MAY BE
FORMED DURING COMBUSTION.
Conditions to Avoid Polymerization:HAZARDOUS POLYMERIZATION WILL NOT
OCCUR

===== Toxicological Information =====

Toxicological Information:NO DATA PROVIDED BY MANUFACTURER

===== Ecological Information =====

Ecological:NO DATA PROVIDED BY MANUFACTURER

===== Disposal Con
siderations =====

Waste Disposal Methods:DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE &
LOCAL REGULATION.

===== MSDS Transport Information =====

Transport Information:D.O.T. INFORMATION: POLYAMINES, LIQUID,
CORROSIVE, N.O.S. (TETRAETHYLENE PENTAMINE, TRIETHYLENE TETRAMINE),
8, UN2735, PGIII.

===== Regulatory Information =====

SARA Title III Information:THIS PRODUCT DOES NOT CONTAIN ANY SUBSTANCES

REGULATED BY THE SARA SECTION 313 AMENDMENTS TO RCRA.
Federal Regulatory Information:TSCA STATUS: ALL COMPONENTS OF THIS
PRODUCT ARE LISTED IN THE EPA TOXIC SUBSTANCE CONTROL ACT
INVENTORY.

State Regulatory Information:VOLATILE ORGANIC COMPOUND (V.O.C.) CONTENT
AS TESTED IN ACCORDANCE WITH THE SOUTHERN CALIFORNIA AIR QUALITY
MANAGEMENT DISTRICT RULE 109 (EPA TEST METHOD 24): 441.5 G/L.

===== Other Information =====

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