

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

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

Product ID:CATALYST 9

MSDS Date:12/31/1998

FSC:5970

NIIN:00-081-4333

MSDS Number: CJKSJ

=== Responsible Party ===

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

Address:46 MANNING ROAD

City:BILLERICA

State:MA

ZIP:01821

Country:US

Info Phone Num:9

78-436-9781

Emergency Phone Num:(800)424-9300

Preparer's Name:DAVID HAAS

Chemtec Ind/Phone:(800)424-9300

CAGE:TO215

=== Contractor Identification ===

Company Name:ELLSWORTH ADHESIVE SYSTEMS

Address:N 117 W 18711 FULTON DR

Box:City:GERMANTOWN

State:WI

ZIP:53022

Country:US

Phone:800-888-0698

Contract Num:SP0430-99-M-Y485

CAGE:0PYJ1

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

Address:46 MANNING ROAD

Box:City:BILLERICA

State:MA

ZIP:01821

Country:US

Phone:781-828-3300 OR

978-436-9781
CAGE:TO215
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:SP0430-00-M-GC18
CAGE:7B953

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

Ingred Name:TETRAETHYLENE PENTAMINE
CAS:112-57-2
Code:F
RTECS #:KH8585000
Minumum % Wt:60.
Maxumum % Wt:70.

Ingred Name:TRIETHYLENETETRAMINE
CAS:112-24-3
RTECS #:YE6650000
Minumum % Wt:20.
Maxumum % Wt:30.

Ingred Name:PENTAET
HYLENEHEXAMINE
CAS:4067-16-7
RTECS #:RZ2680000
= Wt:10.

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

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:EYES-CORROSIVE, MAY CAUSE BURNS;
POSSIBLE CORNEAL INJURY, PERMANENT IMPAIRMENT OR BLINDNESS.
SKIN-CORROSIVE, MAY CAUSE SEVERE BURNS, BLISTERING; MAY CAUSE SKIN
SENSITIVITY/ALLERGIC SKIN REACTIONS; MA YBE HARMFUL IS 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: REPEATED OVEREXPOSURE TO POLYETHYLENE POLYAMINES (INCLUDING ALL THREE LISTED INGREDIENTS) ARE REPORTED TO CAUSE LIVER & KIDNEY INJURY IN LABORATORY ANIMALS.

Explanation of Carcinogenicity:NONE SPECIFIED 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:NONE SPECIFIED 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

W BY WASHING WITH SOAP & WATER. GET IMMEDIATE MEDICAL ATTENTION.DO NOT REUSE CONTAMINATED 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 MEDICAL ATTENTION. INGESTED-DO NOT INDUCE VOMITING! IF CONSCIOUS, DILUTE BY DRINKING WATER. GET IMMEDIATE MEDICAL ATTENTION.

=====
===== 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 EXPOSED CONTAINERS WITH WATER TO PREVENT PRESSURE BUILDUP. IF LARGE QUANTITIES OF MATERIAL ARE INVOLVED, EVACUATE AREA AND FIGHT FIRE FROM A SAFE DISTANCE.

Unusual Fire/Explosion Hazard

rd: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 VERMICULITE OR SIMILAR MATERIAL. WASH AREA WITH SOAPY WATER. COLLECT ABSORBED MATERIAL & WATER RINSES TO APPROPRIATE CONTAINERS. 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:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:STORE IN A COOL, DRY LOCATION WITH ADEQUATE VENTILATION. KEEP CONTAINER TIGHTLY SEALED WHEN NOT IN USE. KEEP AWAY FROM OPEN FLAMES AND HEAT SOURCES. CONSULT PRODUCT TECHNICAL BULETIN FOR DETAILED STORAGE INFORMATION.

Other Precautions:NONE SPECIFIED BY MANUFACTURER.

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

Respiratory Protection:USE AN APPROPRIATE PROPERLY FILLED 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
R

E-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: HCC IS BASED ON THIS IS PART OF A KIT WHICH CARRIES AN HCC OF T4 DUE TO CATALYST 11 WHICH IS SHIPPED AS A 6.1 PG III.

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

HCC:T4

Boiling Pt:=337.8C, 640.F

Vapor Pres:0.001

Vapor Density:>AIR

Spec Gravity:0.99

VOC Pounds/Gallon:441

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 Decomposition Products:CARBON MONOXIDE, CARBON DIOXIDE, OXIDES OF NITROGEN AMINOS AND OTHER ORGANIC SUBSTANCES MAY BE FORMED DURING COMBUSTION.

Conditions to Avoid Polymerization:HAZARDOUS POLYMERIZATION WILL NOT OCCUR

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

Toxicological Information:NONE SPECIFIED BY MANUFACTURER.

===== Ecological

Information =====

Ecological:NONE SPECIFIED BY MANUFACTURER.

===== Disposal Considerations =====

Waste Disposal Methods:DISPOSE OF IAW FEDERAL, STATE & LOCAL
REGULATION.

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

Transport Information:US DOT 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 DISTRIC RULE 109 (EPA TEST METHOD 24).

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

Disclaimer (provided with this information by the compiling agencies):
This information is formulated for use by elements of the Department
of Defense. The United States of America in no manner whatsoever,
expressly or implied, warrants this information to be accurate and
disclaims all liability for its use. Any person utilizing this
document should seek competent professional advice to verify and
assume responsibility for t
he suitability of this information to their
particular situation.