
"SELAR" RB BARRIER RESINS ALL IN SYNONYM LIST SEL002
PL000702 Revised 15-NOV-2006 Printed 15-NOV-2006

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"SELAR" is a registered trademark of DuPont.

Tradenames and Synonyms

"SELAR" RB 215 NC010, RB 223 NC010, RB 236 NC010,
"SELAR" RB 250 NC010, RB 901 NC010, RB 901D NC010, #
"SELAR" RB 910 NC010, RB 920 NC010,

Company Identification

MANUFACTURER/DISTRIBUTOR
E.I. du Pont Canada Company
P.O. Box 2200
Streetsville
Mississauga, Ontario L5M 2H3

PHONE NUMBERS

Product Information : 1-800-387-2122
Medical Emergency : 1-800-441-3637 (24 hours)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
MALEIC ANHYDRIDE MODIFIED POLYOLEFIN		15-60 WT%
NYLON 6/66	24993-04-2	40-85 %
CAPROLACTAM	105-60-2	<2 WT%
MALEIC ANHYDRIDE	108-31-6	<0.1 WT%

Components (Remarks)

Material is not known to contain Toxic Chemicals under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

HAZARDS IDENTIFICATION

Potential Health Effects

Before using "SELAR" RB Barrier Resins, read the bulletin "Safety in Handling and Use".

(HAZARDS IDENTIFICATION - Continued)

ADDITIONAL HEALTH EFFECTS

ACUTE OR IMMEDIATE EFFECTS: ROUTES OF ENTRY AND SYMPTOMS

INGESTION: No data are available. Ingestion is not a probable route of exposure. Based on its similarity with other polymers, these resins are predicted to have low toxicity.

SKIN: No data are available. However, based on experience with handling these polymers, contact with resin may cause mild irritation of skin. Molten polymer contacting the skin will cause thermal burns.

EYE: Contact with processing vapors may cause severe eye irritation.

INHALATION: Polymer is not respirable as sold. At processing temperatures above 260 degrees C, fumes irritating to the eyes, nose and throat may be produced. This exposure may result in reddening, tearing, and itching of the eyes and soreness in the nose and throat together with coughing.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

NYLON 6/66

Eye contact with Nylon 6/66 may cause eye irritation with discomfort, tearing, pain or blurred vision.

CAPROLACTAM

Human experience or case reports have identified the following potential effects from overexposure by inhalation to Caprolactam: irritation of the nose and throat with sneezing, sore throat, dry throat or runny nose; irritation of the gastrointestinal tract with heartburn or discomfort; liver abnormalities; central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness; convulsions; nosebleed; or bitter taste. Repeated and/or prolonged inhalation may cause central nervous system abnormalities. Less frequently, liver abnormalities have been reported. Exposure to Caprolactam fumes or dust may cause concentration-related increases in skin, eye, and upper respiratory tract irritation.

Human experience or case reports have identified the following potential effects from overexposure by skin contact with Caprolactam: skin irritation with itching, burning, redness, swelling or rash; dermatitis with itching or rash; or skin sensitization. By itself 5% Caprolactam showed no clear evidence of dermatitis; however, skin sensitization has been reported in Caprolactam manufacturing facilities. Skin permeation may occur in amounts capable of producing the effects of systemic toxicity.

(HAZARDS IDENTIFICATION - Continued)

Eye contact with Caprolactam may cause eye irritation with tearing, pain or blurred vision. Prolonged or high exposure may cause corneal damage.

Increased susceptibility to the effects of this material may be observed in persons with pre-existing disease of the central nervous system.

MALEIC ANHYDRIDE

Skin contact with Maleic Anhydride may cause skin burns or ulceration. Significant skin permeation, and systemic toxicity, after contact appears unlikely. There are inconclusive or unverified reports of human sensitization.

Eye contact with Maleic Anhydride may cause eye corrosion with corneal or conjunctival ulceration. Exposure to the vapors may cause tearing, blurring of vision, sensitivity to light, or inflammation of the eyelids.

Inhalation of Maleic Anhydride may cause headaches, nausea, irritation or ulceration of the upper respiratory passages; workers have reported nasal irritation after a one minute exposure to 1.5 ppm. This compound may cause asthma-like reactions with shortness of breath, wheezing, or cough. Higher overexposures may cause pulmonary edema (body fluid in the lungs) with cough, wheezing, abnormal lung sounds, possibly progressing to severe shortness of breath and bluish discoloration of the skin. Symptoms may be delayed. Prompt medical attention is required.

Ingestion of Maleic Anhydride may cause severe burns of the mouth and tissues of the upper gastrointestinal tract with severe pain, bleeding, vomiting, diarrhea and collapse of blood pressure.

Prolonged or gross overexposures may cause abnormal kidney function as detected by laboratory tests.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

(FIRST AID MEASURES - Continued)

If exposed to fumes from overheating or combustion, move to fresh air. Consult a physician if symptoms persist.

SKIN CONTACT

In case of contact, immediately wash skin with soap and water. Wash contaminated clothing before reuse. If molten material gets on skin, cool rapidly with cold water. Do not attempt to remove material from skin. Obtain medical treatment for thermal burn.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

Not a probable route. However, in case of accidental ingestion, call a physician.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point : NE

Fire and Explosion Hazards:

Hazardous gases/vapors produced in fire are aldehydes, ammonia, carbon dioxide, carbon monoxide, acrolein, oxides of nitrogen, hydrogen cyanide, cyclopentanone.

UNUSUAL FIRE, EXPLOSION HAZARDS The solid polymer can be combusted only with difficulty. An electrostatic charge can potentially build up when pouring pellets. Grounding of equipment is recommended.

Like most organic powders or crystals, under severe dusting conditions, this material may form explosive mixtures in air.

Extinguishing Media

Water, Foam, Dry Chemical, CO2.

Fire Fighting Instructions

Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus (SCBA) and full protective equipment.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Spill Clean Up

Sweep up to avoid slipping hazard.

HANDLING AND STORAGE

Handling (Personnel)

See FIRST AID and PERSONAL PROTECTIVE EQUIPMENT SECTIONS.

Storage

Store in a cool, dry place. Keep container closed to prevent contamination.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

VENTILATION When hot processing this material, use local and/or general exhaust ventilation to control the concentration of vapors and fumes below exposure limits.

In cutting or grinding operations with this material, use local exhaust to control the concentration of dust below exposure limits.

Use sufficient ventilation to keep employee exposure below recommended limits.

Personal Protective Equipment

EYE/FACE PROTECTION

Wear safety glasses. Wear coverall chemical splash goggles and face shield when possibility exists for eye and face contact due to splashing or spraying of molten material.

RESPIRATORS

When temperatures exceed 260 degrees C and ventilation is inadequate to maintain concentrations below exposure limits, use a positive pressure air supplied respirator. Air purifying respirators may not provide adequate protection.

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

During grinding, sanding, or sawing operations use a NIOSH/MSHA approved air purifying respirator with dust/mist cartridge or canister if airborne particulate concentrations are expected to exceed permissible exposure levels.

PROTECTIVE CLOTHING

If there is potential contact with hot/molten material, wear heat resistant clothing and footwear.

Exposure Guidelines

Exposure Limits

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PEL (OSHA) : Particulates (Not Otherwise Regulated)
15 mg/m³, 8 Hr. TWA, total dust
5 mg/m³, 8 Hr. TWA, respirable dust

Other Applicable Exposure Limits

CAPROLACTAM

PEL (OSHA) : None Established
TLV (ACGIH) : 5 mg/m³, 8 Hr. TWA, Aerosol, & vapor, A5

AEL * (DuPont) : None Established

MALEIC ANHYDRIDE

PEL (OSHA) : 0.25 ppm, 1.0 mg/m³, 8 Hr. TWA
TLV (ACGIH) : 0.1 ppm, 8 Hr. TWA, A4
Sensitizer

AEL * (DuPont) : 0.1 ppm, 8 & 12 Hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Melting Point : NA
% Volatiles : NA
Solubility in Water : Negligible
Odor : Essentially none
Form : Pellets, Granules
Specific Gravity : NA

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Conditions to Avoid

Temperatures above 260 C (500 F) .

Incompatibility with Other Materials

Incompatible or can react with strong acids, oxidizing agents.

Decomposition

Decomposes with heat.

Decomposition temperature: Not determined

Hazardous gases or vapors can be released, including aldehydes, ammonia, carbon dioxide, carbon monoxide, acrolein, oxides of nitrogen, hydrogen cyanide, cyclopentanone.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Nylon 6/66

Nylon 6/66 is a moderate eye irritant, but is not a skin irritant in tests on animals.

No animal test reports are available to define carcinogenic, developmental, reproductive, or mutagenic hazards.

Caprolactam

Skin Absorption LD50:	1410 mg/kg in rabbits
Oral LD50:	1210 mg/kg in rats
Inhalation 4 hour LC50:	8.1 mg/L in rats (as respirable aerosol)

Caprolactam is a skin irritant, a severe eye irritant, and is a mild skin sensitizer when tested at very high concentrations in animals.

Single dermal exposure to near lethal doses caused edema, and tremors or convulsions.

(TOXICOLOGICAL INFORMATION - Continued)

Single ingestion exposure in rats to near lethal doses caused irritation of the gastrointestinal tract, pathological changes of the brain and liver, tremors or convulsions, and altered liver enzyme activity. Repeated dosing of lower concentrations caused decreased body weight. Effects on kidney function have been observed but were attributable to a reversible physiologic change. Long term exposure caused body weight reductions, reduced food consumption, and anemia.

Single inhalation exposure in rats caused nasal/ocular irritation and alterations in blood pressure. Repeated inhalation exposure at high levels caused nasal/ocular irritation, lung and spleen pathology, and abnormal weight gain in rats. At lower levels, respiratory tract irritation with pathological changes in the nose and larynx were observed.

In animal testing Caprolactam has not caused carcinogenicity, developmental or reproductive toxicity.

There are reports indicating that Caprolactam produced genetic damage in some animal or mammalian cell culture tests; however, the majority of in vitro and in vivo reports in the literature show negative results.

Maleic Anhydride

Skin absorption LD50: 2620 mg/kg in rabbits
Oral LD50 : 235 mg/kg (10% solution in corn oil) female rats

Maleic Anhydride is corrosive to the skin and eyes. Tests for skin sensitization have produced positive and negative results in animals.

No deaths occurred when rats were exposed to by inhalation to saturated vapors of maleic anhydride for 8 hours. Repeated or long-term exposure of rats, hamsters or monkeys to this material caused eye, nose, and lung irritation; reduced weight gain was noted at the higher concentrations. Evidence of respiratory sensitization was observed in guinea pigs.

Repeated ingestion of capsules containing Maleic Anhydride caused severe gastrointestinal corrosion. Animals fed diets containing high doses of this material showed pathological changes to the kidney and altered urine analysis. In a different repeated dose ingestion study in rats fed Maleic Anhydride effects were observed in the liver, kidneys, and heart.

Animal testing indicates that Maleic Anhydride does not have carcinogenic, developmental, or reproductive effects.

(TOXICOLOGICAL INFORMATION - Continued)

Maleic Anhydride did not produce genetic damage in bacterial cultures or in animals. It does produce genetic damage in mammalian cell cultures. It has not been tested for heritable genetic damage.

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

No information is available. Do not discharge to streams, ponds, lakes or sewers.

AQUATIC TOXICITY:

CAPROLACTAM

Low toxicity.

96 hour LC50 - Fathead minnows: 1400 mg/L.

AQUATIC TOXICITY:

MALEIC ANHYDRIDE

96 hour LC50 - Fathead minnows: 83.5 mg/L.

96 hour LC50 - Rainbow trout: 75 mg/L.

48 hour LC50 - Daphnia magna: 330 mg/L

DISPOSAL CONSIDERATIONS

Waste Disposal

Preferred options for disposal are (1) recycling, (2) incineration with energy recovery, and (3) landfill. The high fuel value of this product makes option 2 very desirable for material that cannot be recycled. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO/IATA

Not Regulated.

Shipping Information -- Canada

This material is Not Regulated.

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status : In compliance with TSCA Inventory requirements for commercial purposes.

State Regulations (U.S.)

STATE RIGHT-TO-KNOW

No substances on the state hazardous substances list, for the states indicated below, are used in the manufacture of products on this Material Safety Data Sheet, with the exceptions indicated.

SUBSTANCES ON THE PENNSYLVANIA HAZARDOUS SUBSTANCES LIST PRESENT AT A CONCENTRATION OF 1 % OR MORE (0.01% FOR SPECIAL HAZARDOUS SUBSTANCES)- 2H-Azepin-2-One, Hexahydro

WARNING - SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM- None known.

SUBSTANCES ON THE NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST PRESENT AT A CONCENTRATION OF 1% OR MORE (0.1% FOR SUBSTANCES IDENTIFIED AS CARCINOGENS, MUTAGENS OR TERATOGENS)- Caprolactam.

Canadian Regulations

WHMIS Classification:

This is not a WHMIS Controlled Product.

CEPA Status : DSL: REPORTED/INCLUDED.

OTHER INFORMATION

Additional Information

MEDICAL USE: CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications see DuPont CAUTION Bulletin No. H-50102.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS

POLYMERS E.I. du Pont Canada Company
Box 2200, Streetsville
Mississauga, Ontario, L5M 2H3

PL000702

DuPont
Material Safety Data Sheet

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(Continued)

(905) 821-3300.

End of MSDS