BASF Corporation

Material Safety Data Sheet

Page

Original Date:

08/01/2002

Revision Date:

08/15/2002

BASF CORPORATION

3000 CONTINENTAL DRIVE NORTH

MT. OLIVE, NJ 07828

(973) 426-4873

EMERGENCY TELEPHONE: (800) 424-9300 CHEMTREC

(800) 922-WELD (PASF Hotline)

BOTH NUMBERS ARE AVAILABLE DAYS, NIGHTS, WEEKENDS, & HOLIDAYS. SECTION 1 - PRODUCT INFORMATION

RUBBER MODIFIED POLYSTYRENE 473D KG21

Product ID:

NPR 473400

Common Chemical Name:

POLYSTYROL

Synonyms:

BX473D KG21

Molecular Formula:

MIXTURE

Molecular Wt. :

Chemical Family: Polystyrene resin

NOT APPLICABLE

SECTION 2 - INGREDIENTS

Chemical Name:			CAS	Amot	unt	
ZINC STEARATE		55	7-05-1	<	0.1	
OSHA PEL	TWA	15	MG/CU. M			
		5	MG/CU. M			
WHITE MINERAL OIL, PETROL		804	2-47-5 .	<	7.0	*
ACGIH TLV	STEL	10	MG/CU. M			
1.00	TWA	5	MG/CU, M			
osha pel	TWA	5	MG/CU. M		27	
RUBBER MODIFIED POLYSTYRENE PEL/TLV NOT ESTABLISHED		900	3-55-8	>	92.0	*

SECTION 3 - PHYSICAL PROPERTIES

Color: Form/Appearance:

Natural Pallets

Odor:

Odorless

Typical

Low/High U.O.M.

Specific Gravity:

Bulk Density:

NOT AVAILABLE

1.17

pH:

NOT AVAILABLE

Typical Low/High

Boiling Pt:

NOT AVAILABLE

Freezing Pt:

210

760

Decomp. Tmp:

NOT AVAILABLE

RUBBER MODIFIED POLYSTYRENE 473D KG21 NPR 473400

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SECTION 3 - PHYSICAL PROPERTIES (cont)

Solubility in Water Description: Negligible

SECTION 4 - FIRE AND EXPLOSION DATA

Typical

Low/High

Deg. Method

Flash Point:

F NOT SPECIFIED

Autoignition.

> 550

NOT AVATLABLE

Extinguishing Media:

Use water fog, foam, dry chemical, halon or CO2 as extinguishing media.

Fire Fighting Procedures:

Water or foam may cause frothing. Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. For fires in enclosed areas, firefighters must use selfneterange goldsnad bestears Pennant would fine dies contes? or dilution from entering streams, sewers, or drinking water supply.

Unusual Hazards:

This material burns vigorously and releases a dense, black, toxic smoke. Fires are difficult to control. Exposure to fire can generate highly toxic fumes. High dust levels may create a potential for explosion.

SECTION 5 - HEALTH EFFECTS

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Acute Overexposure Effects:

Contact with the eyes and skin may result in irritation.

These pellets are high molecular weight polymers and not expected to be chemically active under recommended conditions of use. Some traces of styrene monomer and possibly traces of additives may be volatized under normal storage and processing conditions. With proper ventilation these products can be processed without exposing employees to unacceptable monomer levels.

Inhalation of mineral oil mists or vapors may result in irritation of the respiratory tract causing mineral oil pneumonitis. Ingestion of mineral oil results in diarrhea, nausea and vomiting.

Inhalation of styrene vapors causes severe irritation to the upper respiratory tract, CNS depression, and loss of balance. Ingestion results in irritation to the mouth, esophagus and stomach.

Recent studies of workers exposed to airborne levels of styrene ranging from 3.2 to 549.5 mg/m3, showed a significant impairment of color vision.

Chronic Overexposure Effects:

This product contains residual amounts of styrene monomer. The National Cancer Institute (NCI) concluded styrene demonstrated suggestive, but not convincing evidence of carcinogenicity in male mice in a lifetime feeding study. The International Agency for Research on Cancer (IARC) has included styrene in Group 2B.

RUBBER MODIFIED POLYSTYRENE 473D KG21 NPR 473400

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SECTION 5 - HEALTH EFFECTS (cont)

Laboratory rats exposed to 800 ppm via inhalation showed evidence of hearing loss. Relevance to humans remains undertain. Preliminary results from industry sponsored lifetime inhalation studies indicate that styrene caused masal lesions in mice and rats. There was no indication of an increased incidence of tumors in rats exposed to airborne concentrations ranging from 50 to 1000 ppm. In mice, exposure to styrene at concentrations of 20 to 160 ppm was associated with increased incidences of masal lesions and benign lung tumors. In female mice, an increase in malignant lung tumors was seen in the highest dose group. The relevance of the mouse tumors to human exposures is unclear and is the subject of further studies being planned. However, numerous epidemiological studies of styrene workers have been conducted which do not indicate carcinogenic effects.

First Aid Procedures - Skin:

If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and get medical assistance for removal of adhering material and treatment of burns. First Aid Procedures - Eyes:

Immediately rinse eyes with running water for 15 minutes. If irritation develops, get medical attention.

First Aid Procedures - Ingestion:

If swallowed, dilute with water and immediately induce vomiting.

Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

First Aid Procedures - Inhalation:

Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

First Aid Procedures - Notes to Physicians:

None known.

First Aid Procedures - Aggravated Medical Conditions:
No data is available which addresses medical conditions that are
generally recognized as being aggravated by exposure to this product.
Please refer to the effects of overexposure section for effects
(if any) observed in animals.

First Aid Procedures - Special Precautions: None

SECTION 6 - REACTIVITY DATA

Stability Data:

Stable

Incompatability:

Strong oxidizers, and aromatic and chlorinated hydrocarbons: Conditions/Hazards to Avoid:

Excessive temperatures.

Hazardous Decomposition/Polymerization:

Hazardous Decomposition Products: Carbon monoxide, possibly hydrocarbon fragments, monomers, acrolein, acids, ketones, and aldehydes.

Sheet#7109 & 7128-01 REV.041206

Polymerization: Does not occur.

RUBBER MODIFIED POLYSTYRENE 473D KG21

NPR 473400

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SECTION 6 - REACTIVITY DATA (cont)

Corrosive Properties:

No data available.

Oxidizer Properties:

No data available.

SECTION 7 - PERSONAL PROTECTION

Clothing:

Gloves, coveralls, apron, and boots as necessary to prevent contact.

Chemical Goggles

Respiration:

Use appropriate respiratory protective equipment during heating operations. Approved dust respirators must be used for dusty conditions or if dust levels exceed established standards. No special requirements under normal conditions of use and with adequate ventilation.

Ventilation:

Use local exhaust to control dusts.

Explosion Proofing:

None required.

SECTION 8 - SPILL-LEAK/ENVIRONMENTAL

General:

Spills should be contained, solidifed, and placed in suitable containers for disposal in a licensed facility. This material is not regulated by RCRA or CERCLA ("Superfund"). Wear appropriate respiratory protection and protective clothing and provide adequate ventilation during clean-up.

Waste Disposal:

Incinerate in a licensed facility. Do not discharge into waterways or sewer systems.

Container Disposal:

Dispose of in a licensed facility. Recommend crushing or other means to prevent unauthorized reuse.

SECTION 9 - STORAGE AND HANDLING

General:

Store in a cool area.

SECTION 10 - REGULATORY INFORMATION

TSCA Inventory Status

Listed on Inventory:

YES

RCRA Haz. Waste No .:

Reportable Qty.: (If YES) CERCLA: NO

State Regulatory Information: (By Component)

NJ/PA/MA RTK

557-05-1 CAS :

YES NO

NAME:

ZINC STEARATE

CAS;

8042-47-5

NAME:

WHITE MINERAL OIL, PETROL

RUBBER MODIFIED POLYSTYRENE 473D KG21

NPR 473400

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SECTION 10 - REGULATORY INFORMATION (cont)

State Regulatory Information: (By Component)

NJ/PA/MA RTK

NJ/PA/MA RTK

CAS:

9003-55-8

NO

NAME :

RUBBER MODIFIED POLYSTYRENE

SECTION 11 - TRANSPORTATION INFORMATION

DOT Proper Shipping Name:

N/A

DOT Technical Name:

N/A

DOT Primary Hazard Class:

DOT Secondary Hazard Class:

N/A

DOT Label Required:

N/A

DOT Placard Required:

N/A

DOT Poison Constituent:

N/A

BASF Commodity Codes:

UN/NA Code:

E/R Guide:

Bill of Lading Description:

NOT REGULATED BY THE DEPARTMENT OF TRANSPORTATION "IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS. IMPORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY BASE HEREUNDER ARE GIVEN GRATIS AND BASE ASSUMES NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK". BASE CORPORATION WILL NOT MAKE ITS PRODUCTS AVAILABLE TO CUSTOMERS FOR USE IN THE MANUFACTURE OF MEDICAL DEVICES WHICH ARE INTENDED FOR ACCUMENT CONTACT STREETS AND DESCRIPT. HE WE SHARP AND CONTACT THE LAND PRODUCTS, AND OUR TRADITION OF DEVELOPING INNOVATIVE APPLICATIONS IN PARTNERSHIP WITH OUR CUSTOMERS. HOWEVER, THE POSSIBILITY OF BEING REQUIRED TO RESPOND TO UNFOUNDED LITIGATION AND/OR CLAIMS ARISING OTHE OF AMPLEBRO DELYMING TO GIVE HER DESCRIPTE YET IMPACEMENT BLOK TO THE CONFESSE.

NPR 678500	sportow 11	- TRANSPOR	PATION INF	ORMATION	cont)	
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MATERIAL SAFETY DATA SHEET

MSDS Number: "

C402711

Issue Date:

Roviged Date:

08/01/91

03/12/2002

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Product Name:

GR, RA, RC, RF, RH, RJ, RL, RN, RF. RQ, RS, RT, RV, RW, RX, RG, TA, TC, TF, TH, TJ, TL, TN, TP, TQ, TS 00 through 99, TT, TV, TW, TX, TG,

TR-,TPR-Series

Polypropylene Ethylene Random Copolymer

Sunoco Chemicals, Polymers Division

Emorgonoy;

550 Technology Drive Pittsburgh, PA 15219

Chemirec (800) 424-9300

Sunoco (800) 964-8861

SECTION 1 - PRODUCT IDENTIFICATION

Product Name:

Polypropylene Ethylene Random Copolymer

Synonyms:

N/A

Chemical Name:

1-propent, polymer with others

Division:

SECTION 2 - HAZARDOUS	INGREDIENTS	 		
INGREDIENT NAME	CASNO.	% WT	Exposure Limits	******
Propylene-ethylene Polymer	9010791	100	N (Hazardous) N/A (OSHA PEL TWA) N/A (ACGIH TLV TWA)	Si

SECTION 3 - HAZARD IDENTIFICATION

Emergency Overview:

Caution! Generally recognized as a low potential industrial hazard. Inhalation of vapors from thermal processing may cause irritation to the upper respiratory tract.

Relevant Routes of Exposure:

Inhalation.

Signs and Symptoms of Acute

Overexposure:

Inhelation of fumes, vapors and smoke from thermal processing may cause irritation to the upper respiratory tract. Symptoms may include burning scuration, coughing and soro throat. Molten resin may cause severe thermal burns to the eyes and skin. Symptoms may include radness, pain, blistering, and swelling of the affected areas.

Signs and Symptoms of Chronic Overexposure:

No known chronic health effects have been observed with normal product use.

Medical Conditions Generally Aggravated By Exposure:

Individuals with chronic respiratory disorders may be adversely affected by any fume or airbome particulate matter exposure. Persons with preexisting skin disorders may be more susceptible to the effects of this material.

Potential Health Effects:

Eyes:

Transient irritation from contact with pellots. Possible irritation from decomposition and processing fumes. Thermal burns from molten material.

> Sheet#7109 & 7128-01 REV.041206

Call Free: 1 800 848 1633 or 1 888 HCL INTL® (425 4685) • Fax Free: 1 800 447 2923 Web Site: www.HealthCareLogistics.com • E-mail: hcl@HealthCareLogistics.com



MATERIAL SAFETY DATA SHEET

MSDS Number: =

-C4027H

Issue Date:

08/01/91

Product Name:

GR, RA, RC, RF, RH, RJ, RL, RN, RP, RQ, RS, RT, RV, RW, RX, RG, TA, TC,

Revised Date:

03/12/2002

TF, TH, TJ, TL, TN, TP, TQ, TS 00 through 89, TT, TV, TW, TX, TQ,

TR-,TPR-Series

Polypropylene Ethylene Random Copolymer

Skin

Thermal burns from molton material.

Ingestion:

Product in marketed form is inert.

Inhalation:

Prolonged or repeated exposure from thermal processing may cause irritation to the upper

respiratory tract.

Carcinogenicity:

NTP

N/A

IARC:

N/A

OSHA:

N/A

ACGIH:

N/A

OTHER:

N/A

SECTION 4 -FIRST AID MEASURES

Eyes:

Flush immediately with plenty of cool water for at least 15 minutes. Call a physician.

Skin:

For thorms, burns, immediately flush with plenty of cold water. If possible, submorge affected

areas in cold water. Call a physician.

Ingestion:

Product in its marketed form is inert. No special first aid procedures necessary.

Inhalation:

Por overexposure to heated resins, remove from exposure. If breathing is difficult, or has

stopped, administer artificial respiration (mouth-to-mouth) or oxygen as indicated. Call a

physician.

Notes to Physicians:

None.

SECTION 5 - FIRE FIGHTING PROCEDURES

Flammable Limits in Air (% by Volume):

N/A

Flash Point:

N/A

Extinguishing Media:

Use water spray, carbon dioxide or dry chomicals to extinguish fire.

Fire Fighting Instructions:

Polypropylene is a slow burning plastic which emits a dense black smoke. Firefighters should wear self-contained breathing apparatus and protective clothing when fighting fires

of this type.



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08/01/91

Product Name:

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TF, TH, TJ, TL, TN, TP, TQ, TS 00 through 99, TT, TV, TW, TX, TG,

TR-,TPR-Series

Polypropylene Ethylene Random Copolymer

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Unusual Fire and Explosion

Hazardsı

Combustion products may be hazardous.

Known or Anticipated Hazardons

Products of Combustion:

Combustion products may include earbon dioxide, carbon monoxide and acrid smoke and

funes.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Accidental Release Measures and Methods for Cleanup:

If released or spilled, sweep up and place loose material in labeled container. Loose pollets may present a slipping hazard. Clean up immediately.

SECTION 7 - HANDLING AND STORAGE

Handling:

Avoid excessive breathing of vapors, fumos and smoke which may be released during thermal

processing.

Storage:

Store in cool, dry area.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Vontilation Requirements:

Local exhaust ventilation should be used to control the emission of air contaminants.

· Personal Protective Equipment:

Eyo/Face:

Wear chemical safety goggles/glasses to prevent eye contact. A face shield should be used

when appropriate to prevent contact with molten product

Skini

Whon necessary, garments for protection against hot materials should be used to provent

skin contact with molten product.

Respiratory:

Respiratory protection approved by NIOSH/MSHA for protection against organic vapors and

dusts/mists should be used to avoid inhalation of excessive air contaminants.

Other Protective
Clothing/Equipment:

Emergency eye wash stations should be available in the work area. General dilution ventilation may assist with the reduction of air contamination concentrations.

SECTION 9 - PHYSICAL/ CHEMICAL PROPERTIES

Appearance:

Solid, opaque whitish pellets (natural resin) or flake.



MATERIAL SAFETY DATA SHEET

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C4027H

Issue Date:

Revised Date:

08/01/91

03/12/2002

Product Name:

OR, RA, RC, RF, RH, RJ, RL, RN, RF. RQ, RS, RT, RV, RW, RX, RG, TA, TC, TF, TH, TJ, TL, TN, TP, TQ, TS 00 through 99, TT, TV, TW, TX, TG,

TR-,TPR-Series

Polypropylene Ethylene Random Copolymer

Molecular/Chemical Formula:

 $(C_1H_e\cdot C_2H_1)_{i}$

Evaporation Rate:

Boiling Point:

N/A N/A

Bulk Dentity:

N/A

Freezing Point:

N/A

Melting Point:

140-150° C (softening)

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Octanol/Water Partition

Coefficient:

N/A

Water/Of Distribution Coefficients

N/A



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MATERIAL SAFETY DATA SHEET

MSDS Number:

C4027H

Issue Date:

Revised Date:

08/01/91 03/12/2002

Product Name:

GR, RA, RC, RF, RH, RJ, RL, RN, RP, RQ, RS, RT, RV, RW, RX, RG, TA, TC, TF, TH, TJ, TL, TN, TP, TQ, TS 00

TF, TH, TJ, TL, TN, TP, TQ, TS 00 through 99, TT, TV, TW, TX, TG,

TR-,TPR-Suries

Polypropylene Ethylene Random Copolymer

Odor:

Odorless

Odor Threshold:

N/A

Percent Volatile:

N/A

pH Value:

NA

Physical States

Solid

Reactivity in Water:

N/A

Solubility in Water:

Negligible

Specific Gravity or Density

0.89-0.91 (@25° C)

(Water=1):

Yapor Density:

N/A

Vapor Pressure:

Negligible

SECTION 10 - STABILITY / REACTIVITY

Stability:

Stable

Conditions to Avoid:

None known.

Incompatibility With Other

Materials:

Potassium permanganare, liquid chlorine, fuming nitric acid and other strong oxidizing agents.

Hazardous Decomposition

Products:

Carbon dioxide, earbon monoxide, organic oxidation products, serid smoke and futnes.

Hazardous Polymerization:

Will not occur.

Conditions to Avoid:

None known.

SECTION 11 - TOXICOLOGICAL INFORMATION

VALUE	ANIMAL	Routes	COMPONENTS
N/A	N/A	N/A	N/A

Texicological Information:

Polypropylene has been rested in laboratory rats by subsutaneous implantation of discs or powder. Local sarcomas were induced at the site of implantation. No epidemiological studies or case reports suggest any serious chronic health hazards from long-term exposure to polypropylene decomposition products below the irritation level (IARC, 19, 218).

SECTION 12 - ECOLOGICAL INFORMATION

Ecological Information:

No ecological data are currently available.



MATERIAL SAFETY DATA SHEET:

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TR-TPR-Series

Polypropylene Ethylene Random Copolymer

SECTION 13 - DISPOSAL CO	nsiderations					
Disposal Considerations:	Dispose of in accordance with local, state and federal requirements.					
Section 14 - Transport I	NFORMATION	,				
		. U.S. DOT				
Proper Shipping Name:	N/A	Hazard Class:	N/A			
ID Number:	N/A	Packing Groups	N/A	_		
SECTION 15 - REGULATORY	INFORMATION					
U.S. Federal Regulations:	Toxic Substances Co	ontrol Act (TSCA) Inventory- Yes				
State Regulations:	N/A					
International Regulations:	European Inventory (EINECS)- Unknown Canadian Inventory (DSL)- Yes					
SARA Hazards:		•	•			
Acute:	No	Chronic:	No	•		
Reactive:	No	Fire:	No			
Pressure:	No					
SECTION 16 - OTHER INFO	RMATION					
NFPA Codes:						
Health:	1,	Flammability:	1			
Reactivity:	٥			#		
HMIS Codes:			•	ñ		
Health:	0	Flammability:	1			
Reactivity:	0	•				