GE Plastics
Material Safety Data Sheet

General Electric Company
Parkersburg Center, Fifth & Avery Sts.
Parkersburg, WV 26102

F157

308 Visor
AND
408 Visor

DATE: 03/01/89
MSDS NO: PL-0117-89B

EMERGENCY TELEPHONE NUMBERS
MEDICAL (304) 863-7284 (24 Hour)
CHEMTREC (800) 424-9300
OTHER (304) 424-5411

PRODUCT IDENTIFICATION CYCOLAC T

TRADE NAME	Cycolac T
COMMON NAME	ABS polymer
CHEMICAL NAME	Acrylonitrile-butadiene-styrene terpolymer
CAS NUMBER	9003-56-9
FORMULA	Not applicable

HAZARDOUS INGREDIENTS

CHEMICAL NAME Styrene
CAS NUMBER 100-42-5

OSHA PEL 50 ppm TWA8	ACGIH TLV 50 ppm TWA8
ACGIH STEL 100 ppm	OSHA CEIL 100 ppm

These materials are high-molecular-weight polymers not expected to be chemically active under recommended conditions of use. Trace amounts of residual monomers, including acrylonitrile and styrene, suspected carcinogens, are present and may be released under suggested processing temperature ranges. For Hazard Communication purposes under OSHA Standard 29CFR 1910.1200 styrene monomer is listed as a possible carcinogen based upon an evaluation from IARC. (See Health Hazard Information)

PHYSICAL AND CHEMICAL PROPERTIES

STATE	Solid pellets
ODOR	Faint
MELTING POINT	218-262°F (103-128°C)
BOILING POINT	Unknown
VAPOR PRESSURE (mmHg)	Unknown
VAPOR DENSITY (AIR=1)	Unknown
SPECIFIC GRAVITY	1.02-1.17
WATER SOLUBILITY	Insoluble

These materials do not exhibit a sharp melting point, but soften gradually over a wide temperature range.

PHYSICAL HAZARD INFORMATION

FLASH POINT	660 degrees F (349 degrees C)
LOWER FLAMMABLE LIMIT	Unknown
UPPER FLAMMABLE LIMIT	Unknown
AUTO IGNITION TEMP	946 degrees F (508 degrees C)

EXTINGUISHING MEDIA: Dry Chemical, water spray, carbon dioxide, foam, water fog or spray.

FIRE AND EXPLOSION HAZARD: Hazards from burning are intense heat and very high levels of dense, black smoke containing carbon monoxide, carbon dioxide, and hydrogen cyanide.

FIREFIGHTING: Do not use high pressure water stream or other method that creates dust. Firefighters should be provided the necessary protective clothing and use a self-contained breathing apparatus approved by NIOSH or MSHA for all fires.

HEALTH HAZARD INFORMATION

PRECAUTIONARY INFORMATION: Fumes emitted from the hot plastic during converting operations may condense on cool overhead metal surfaces or structures. That condensate, usually in the form of a soft, grease-like, semi-solid, may contain substances which can be irritating and toxic. Avoid contact of that material with the skin. Wear rubber or other impermeable protective gloves when cleaning contaminated surfaces. Typical volatile emissions from polymers under recommended process conditions, in addition to the materials previously discussed, may be water vapor and trace amounts of such materials as ethyl benzene, phenol, acrolein, acetophenone, alpha-methylstyrene, 4-vinyl cyclohexene, and cumene. Wash hands with soap and water before eating or smoking and at the end of each work day.

SYMPTOMS OF OVEREXPOSURE

***Acute**

Inhalation: Fumes produced during the melt-processing of these plastics may produce acute health effects in some individuals, especially irritation of the eyes, nose and throat, and in cases of severe over-exposure, nausea and headache.

Skin Contact: Fumes emitted from hot plastic during converting operations may condense on cool overhead metal surfaces or structures. This condensate, usually in the form of a soft, grease-like, semi-solid, may contain substances which can be irritating and toxic.

Eye Contact: Fumes from hot melt-processing may cause irritation.

Ingestion: Not acutely toxic. Not a probable route of exposure.

***Chronic**

No known human chronic effects.

RESTRICTIVE MEDICAL CONDITIONS: Unknown

PRIMARY ROUTES OF EXPOSURE

INHALATION	Yes	INGESTION	Unlikely
SKIN ABSORPTION	No	SKIN AND EYE CONTACT	Yes

TOXICITY INFORMATION
Oral LD50 (Rat): > 5 gm/kg (Estimated)

The oral LD50 represents the product containing the maximum concentration of controlled ingredients.

FIRST AID PROCEDURES

INHALATION: If affected by fumes, remove to fresh air. Refer to a physician for treatment.

SKIN CONTACT: Molten plastic causes severe burns. Cool rapidly with water and immediately obtain medical attention to remove the cooled plastic.

EYE CONTACT: Flush immediately with large amounts of water for at least 15 minutes. If irritation persists, contact physician.

INGESTION: Not probable. Keep person warm and at rest. Obtain medical attention.

EXPOSURE LIMITS
Not applicable

CARCINOGENIC STATUS
OSHA REGULATED: Not Regulated
NATIONAL TOXICOLOGY PROGRAM: Not Tested
INTERNATIONAL AGENCY FOR RESEARCH ON CANCER: Listed

The Carcinogenic Status classifications do not apply to the product which has not been tested or reported on by the listed agencies, but rather refer to trace amounts of styrene monomer in the product. For Hazard communication purposes under OSHA STANDARD 29 CFR 1910.1200, styrene monomer is listed as a possible carcinogen based upon an evaluation by IARC. Neither the current epidemiology data from workers exposed to styrene monomer nor the current data from long-term animal toxicology studies provides an adequate basis to conclude that styrene monomer is carcinogenic. Testing by the National Toxicology Program is in progress, but results are not yet available.

Certain heavy metal salts, present as color pigments and based upon cadmium, chromium, copper, lead, or mercury metals, may be present in some color codes. Those ingredients are essentially mixed into the plastic and are unlikely to contribute either to pollution of soils and waters or to personnel handling hazards.

REACTIVITY: Stable.

INCOMPATIBILITIES: Strong oxidizing agents.

CONDITIONS TO AVOID: Do not exceed 550°F (288°C). Purgings should be collected only as small, flat thin shapes or in thin strands to allow for rapid cooling. Precautions should be taken against auto-ignition of hot, thick masses of the plastic. Quench in water. Grinder dust is an explosion hazard.

HAZARDOUS DECOMPOSITION PRODUCTS: Styrene monomer, ammonia, acrylamide, aromatic and aliphatic hydrocarbon fragments and carbon monoxide may be present. Primary toxic products of combustion are carbon monoxide, and hydrogen cyanide. Carbon dioxide, an asphyxiant, is also produced.

PRECAUTIONS FOR SAFE HANDLING AND STORAGE

STORAGE, HANDLING, AND SHIPPING: Instruct all pertinent personnel to read and become familiar with all labels and instructions on the packages. Avoid storing containers near foodstuffs due to the possibility of odor and taste contamination of the food. Do not store containers near heating devices, hot pipes, etc. The head-space of boxes, bulk-trucks or hopper cars may accumulate low concentrations of residual monomers which can be toxic or explosive. Open all containers under conditions of good ventilation, away from flames or ignition sources; and avoid breathing the trapped fumes. With proper ventilation these products can be stored or processed without exposing employees to unacceptable monomer levels. The gaseous emissions from the vents of vented-barrel presses and extruders should not be discharged into the work areas. These materials should be exhausted, under controlled ventilation, to the outside of the building, or may be discharged into a closed process-wastewater system (no open trenches or manholes), or can be trapped by a suitable catalytic conversion device (consult the manufacturer of such device to determine its suitability with these plastics.)

SPILLS/LEAKS/RELEASES: For spills, leaks or releases of the pellets, remove from all floor areas to allow for stable footing and preventing slips by personnel.

WORKPLACE RELEASE: For spills or leaks of the pellets, remove from all floor areas to allow for stable footing and preventing slips by personnel.

SOIL RELEASE: Collect for re-use or appropriate disposal.

WATER RELEASE: Notification of government agency may be appropriate.

AIR RELEASE: Not likely to be released to the air.

WASTE DISPOSAL: Landfill waste plastic if codes permit, or incinerate if codes and equipment permit. Incinceration equipment should be capable of handling large volumes of dense, black smoke and withstand the corrosive effects of acid gases. These pellet materials are not considered hazardous waste under Title 40, CFR Part 261 (Hazardous Wastes under the Resources Conservation Recovery Act), reference Sections 261.31, .32. .33(e) and .33(f). They do not have the characteristics of a hazardous material as defined under Sections 261.21, .22, .23 and .24.

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

VENTILATION: Recommended; sufficient to control fumes.

PERSONAL PROTECTIVE EQUIPMENT

DEGREE OF EXPOSURE	EYE	SKIN	RESPIRATORY	OTHERS
CLOSED SYSTEM (REMOTE)	A	D	NONE	NONE
OCCASIONAL (INFREQUENT)	A	D	NONE	NONE
REPEATED & PROLONGED	A	D	G	NONE
SPILLS (GROSS CONTACT)	A	D	G	NONE

KEY FOR PERSONAL PROTECTIVE EQUIPMENT

A	SAFETY GLASSES	H	FULL FACE W/CANISTER
B	CHEMICAL GOGGLES	I	FULL FACE W/SUPPLIED AIR
C	GAS TIGHT GOGGLES	J	FACESHIELD
D	ORDINARY WORK CLOTHES	K	GLOVES
E	IMPERVIOUS CLOTHING	L	APRON
F	IMPERVIOUS AND GAS TIGHT	M	BOOTS
G	HALF MASK W/CARTRIDGE	N	NONE

RESPIRATORY PROTECTION: Under conditions of excessive fume concentration, a NIOSH or MSHA approved device with an OVAG (organic vapor acid gas) rating or fresh air supply should be used.

GLOVES: Use for hot material.

MSDS SUMMARY

MSDS GENERAL WARNING: FUMES PRODUCED DURING MELT-PROCESSING MAY CAUSE EYE, SKIN, AND RESPIRATORY TRACT IRRITATION. MOLTEN PLASTIC MAY CAUSE THERMAL BURNS.

UN NUMBER: None

DOT HAZARD CLASS: Not regulated

OSHA PHYSICAL HAZARD LIST

PYROPHORIC	No	OXIDIZER	No
EXPLOSIVE	No	PEROXIDE	No
FLAMMABLE	No	COMPRESSED GAS	No
COMBUSTIBLE	No		

RCRA WASTE NUMBER: Not applicable

DATE OF ISSUE	DATE REVISED	REPLACES
10/12/88	03/01/89	PL-0117-89A