

Daicel Polymer Ltd.

DATE OF PREP.: 09/09/2004

MSDS ID :

AJ1120-HP2

MATERIAL SAFETY DATA SHEET**SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: NOVALLOY
E88

CHEMICAL NAME AND SYNONYMS:

Acrylonitrile-butadiene-styrene-methyl methacrylate copolymer
CHEMICAL FAMILY: Organic Terpolymer

MANUFACTURER: Daicel Polymer Ltd.

CONTACT POINT:

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SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

Base resin	CAS Registry No
Acrylonitrile-butadiene-styrene-methyl methacrylate copolymer	9010-94-0

This is a polymeric material. All constituents are wetted by the polymer system, and therefore, present no likelihood of exposure under normal conditions of proceeding and handling.

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

APPEARANCE AND ODOR: Pellets, Slight Characteristic odor
Combustion and decomposition may produce hazardous fumes.
Molten material can cause thermal burns on contact with skin or eyes.
Spilled pellets may create a slipping hazards.

POTENTIAL HEALTH EFFECT:

ROUTES OF ENTRY: Skin and eye contact.

SIGNS AND SYMPTOMS OF EXPOSURE:

No specific information available.

ACCUTE / SHORT TERM EFFECTS:

EYE CONTACT: No specific information available. Polymer particle may act as a foreign body.

SKIN CONTACT: No specific information available. Molten material has the potential to cause thermal burns.

INGESTION: No specific information available.

INHALATION: No specific information available. Pellets are not considered an inhalation hazard; polymer particulates may be considered an inert nuisance particulate.

CHROMIC / LONG TERM EFFECTS:

No specific information available.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

No specific information available.

SECTION 4 FIRST AID MEASURES

EYE CONTACT: Flush with plenty of water. Seek medical attention if discomfort persists, and to remove foreign body.

SKIN CONTACT: If molten polymer contact skin, cool rapidly with cold water.
Seek medical attention.

INGESTION: If a significant quantity has been swallowed, give two glasses of water to dilute. Seek medical attention.

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 INHALATION: Remove to fresh air. Seek medical attention if difficulties in breathing occur.

SECTION 5 FIRE FIGHTING MEASURES**FLAMMABLE PROPERTIES**

FLASH POINT: (Base Resin)	No Data Available	
FLAMMABILITY LIMIT IN AIR:	LEL: Not available	UEL: Not available
AUTO IGNITION TEMPERATURE:	405 deg C.	

HAZARDOUS PRODUCTS OF COMBUSTION:

Carbon monoxide, carbon dioxide,

EXTINGUISHING MEDIA:CO₂, foam, dry chemical, or water spray.**FIRE FIGHTING INSTRUCTIONS:**

Water should be used to keep fire-exposed container cool.
 Water and/or dry chemical use may cause damage to machinery.
 Self-contained breathing apparatus and personal protective equipment may be needed.

SECTION 6 ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**

Prevent pellet loss. Pellets are slippery. Sweep up spills.

SECTION 7 HANDLING AND STORAGE**HANDLING:**

Do not handle molten material without appropriate protective equipment.
 Maintain good housekeeping in work areas.

STORAGE:

Store in a cool, dry place in the original container when practical.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**ENGINEERING CONTROLS:**

Local Exhaust: Recommended when appropriate to control employee exposure.
 General: May not be adequate as the sole means to control employee exposure.

PERSONAL PROTECTIVE EQUIPMENT

GLOVES: Recommended during melt processing.
 EYE: Safety eyewear recommended.
 RESPIRATORY: A NIOSH approved respirator for dust is recommended if there is a possibility of dust/fiber generation.

EXPOSURE GUIDELINES:

Operations involving grinding and machining of parts should be reviewed to assure that particulate levels are kept below recommended standards.

PERMISSIBLE EXPOSURE LIMITS

OSHA PEL (nuisance/inert dust):	15 mg/cM (total) 5 mg/cM (respirable)
ACGIH TLV (nuisance particulates)*	10 mg/cM (total)

*DAICEL recommended limit.

Under certain conditions, this product may release Styrene vapors.
 Styrene (CAS RN 100-42-5) is considered a possible human carcinogen by IARC.
 Operations should be reviewed to assure that the Styrene levels are kept below the following

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recommended limits:

STYRENE PERMISSIBLE EXPOSURE LIMITS

OSHA Transitional : 100 ppm 8 hr. TWA; 200 ppm Ceiling
OSHA Final : 50 ppm 8 hr. TWA; 100 ppm STEL
ACGIH TLV* : 50 ppm 8 hr. TWA; 100 ppm STEL

*DAICEL recommended limit.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Pellets	VAPOR PRESSURE: Not applicable
PHYSICAL STATE: Solid	PERCENT VOLATILE Not available
ODOR: Slight odor	SOLUBILITY IN WATER: Negligible
MELTING POINT: Not applicable	SPECIFIC GRAVITY: 1.0-1.2

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

CONDITION TO AVOID:

Recommended molding temperatures vary from 200 - 240 deg C
depending on the specific NOVALLOY resin.

Avoid prolonged exposure to temperatures above the recommended processing temperatures. Above 280 deg C, NOVALLOY resin may undergo degradation to compounds which may be toxic and produce irritation to the eyes and respiratory tract.

INCOMPATIBILITY (MATERIAL TO AVOID):

None known.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide, carbon dioxide, styrene, acrylonitrile, hydrocarbon, and hydrogen cyanide.*

* The above information was obtained from available scientific literature on similar
acrylonitrile-butadiene-styrene resins.

HAZARDOUS POLYMERIZATION:

Will not occur

SECTION 11 TOXICOLOGICAL INFORMATION

No information available.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY:

No data available.

ENVIRONMENTAL FATE:

No data available. No biodegradation is expected.

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Bury in landfill in accordance with federal, state, and local regulations.

SECTION 14 TRANSPORT INFORMATION

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DEPARTMENT OF TRANSPORTATION:

Hazard Class : Not Regulated.

SECTION 15 REGULATORY INFORMATION

SARA TITLE III SECTION 313:

This product may contain the following chemical(s) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:

CHEMICAL	CAS RN	Wt %
Styrene	100-42-5	0 - 0.2

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All the components of this product are listed on the TSCA Inventory.

SECTION 16 OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION(NPFA):

Fire:	1
Health:	0
Reactivity:	0
Special:	none

DISCLAIMER:

To the best of our knowledge the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy or completeness of such information. We strongly recommend that the users seek and adhere to the manufacturer's or supplier's current instructions for handling each material they use, and that they satisfy themselves that they can meet all applicable safety and health standards.

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