

MATERIAL SAFETY DATA SHEET

G&W Electric Company
3500 West 127th Street
Blue Island, IL. 60406
(708) 388-5010/ Fax (708) 388-0755

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Novoid #224	
Product Use:	Fuel additive. Sealants Coatings Lubricants Cling Film. Adhesives	
General Use:	Heavy polybutene high voltage insulating compound	
Chemical Family:	Isobutylene/butene copolymer	
Manufacturer:	G&W Electric Co. 3500 West 127 th Street Blue Island, IL 60406-1864	Telephone/Fax Numbers: (708) 388-5010/(708)388-0755 Hours: 8:00A.M. - 4:00P.M.

SECTION 2. COMPOSITION AND INGREDIENT INFORMATION

Ingredient Name	CAS#	% by Weight	Exposure Limits
Polybutene (Isobutylene/butene copolymer)	9003-29-6	100	None Assigned

SECTION 3. HAZARD IDENTIFICATION

Physical State: Liquid

Color: Clear. Colorless

Emergency Overview: CAUTION!

This Product has been evaluated and does not require any hazard warning on the label under established regulatory criteria.

Use only with adequate ventilation. Wash thoroughly after handling. Avoid contact with eyes.

Routes of Entry: Skin contact. Eye contact. Inhalation. Ingestion.

POTENTIAL HEALTH EFFECTS

Eyes May cause slight transient irritation. Heated material can cause thermal burns.

Skin Repeated exposure may cause skin dryness or cracking. Heated material can cause thermal burns.

Inhalation Exposure to aerosols or particulates from heated material may cause adverse lung effects if high concentrations are inhaled.

Ingestion Ingestion may cause gastrointestinal irritation and diarrhea.

Medical Conditions Aggravated by

Overexposure: Repeated or prolonged exposure is not known to aggravate medical condition.

See Toxicological Information (Section 11)

SECTION 4. FIRST AID MEASURES

Eye Contact: Hot material: Flush eyes with plenty of water for at least 15 minutes. Seek medical assistance for mechanical removal of this material from the eye. The use of flush fluid, other than water, is not recommended. Cold material: Flush eyes with plenty of water.

Skin Contact: Hot material: Immediately flush with cool water for at least 15 minutes. Get immediate medical attention. Cold material: Clean exposed skin with waterless hand cleaner.

Inhalation: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

Notes to Physician: Medical personnel may leave the material in place to minimize physical damage to the skin. Medical personnel may cover the material with a burn gel to prevent the adhesion of the dressing to the material.

SECTION 5. FIRE FIGHTING MEASURES

Flammability of the Product:	May be combustible at high temperature.
Flash Point:	>154 °C (OPEN CUP) Cleveland. 125 to 165 °C (CLOSED CUP) Pensky-Martens.
Products of Combustion:	These products are carbon oxides (CO, CO ₂)
Unusual fire/explosion hazards:	Rapid depolymerization can occur in a fire to produce flammable vapors. Non-explosive in presence of open flames, sparks and static discharge, of shocks, of heat, of oxidizing materials.
Fire Fighting Media and Instructions:	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet. Cool closed containers exposed to fire with water.
Protective Clothing (Fire):	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Immediately contact emergency personnel. Keep unnecessary personnel

Precautions:	<p>away. Use suitable protective equipment. Follow all fire fighting procedure.</p> <p>If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Avoid contact of spilled material and runoff with soil and surface waterways.</p> <p>Keep out of waterways. Treat as an oil spill. Insoluble in water.</p>
Environmental Precautions and Clean-up Methods:	<p>If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Minimize contact of spilled material with soils to prevent runoff to surface waterways.</p>
Personal Protection in Case of a Large Spill:	<p>Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult specialist BEFORE handling this product.</p>

SECTION 7. HANDLING AND STORAGE

Handling:	<p>Avoid breathing vapors or spray mists. Adequate ventilation should be provided if there is risk of aerosol formation. Keep away from sources of ignition. Ground all equipment containing material. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to heat or sources of ignition. To avoid fire or explosion, dissipate static electrically during transfer by grounding and bonding containers and equipment before transferring material. Wash thoroughly after handling. Avoid prolonged or repeated contact with skin. Avoid contact with eyes.</p> <p>Empty containers may contain harmful, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against those hazards.</p>
Storage:	<p>Store in a segregated area. A potentially flammable atmosphere may be generated if material is held hot for prolonged periods. For prolonged storage at temperatures of 60C and above, keep in rust-free tanks and exclude oxygen by use of a nitrogen blanket. Heating systems which generate localized hot spots should never be used. Suitable storage materials are: Mild steel / carbon steel. Store and use away from heat, sparks, open flame, or any other ignition source. Keep container tightly closed in a cool, well-ventilated place.</p>

SECTION 8. EXPOSURE AND CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
Polybutene (Isobutylene/butene copolymer)	None assigned.

Control Measures:	Use only with adequate ventilation. Avoid breathing vapor or mist. Wear
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	appropriate respirator when ventilation is inadequate. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Hygiene Measures:	Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of the day.
Personal Protection	
Eyes:	Safety glasses with side shields. Goggles, face shield, or other full-face protection if potential exists for direct exposure to aerosols or splashes, or when material is handled hot.
Skin and Body:	Wear apron or coverall if potential for exposure to splashes. When handling hot material, wear heat resistant protective gloves, clothing and face shield that are able to withstand the temperature of the heated product.
Respiratory:	Respiratory protection is not normally required. If heated and ventilation is inadequate, use respirator which will protect against organic vapor and dust/mist.
Hands:	<p>Gloves: Protective gloves should be worn under normal conditions of use, (Nitrile gloves.) When handling hot material, wear heat resistant protective gloves, clothing and face shield that are able to withstand the temperature of the heated product.</p> <p>The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.</p>
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES	
Physical State:	Liquid
Odor:	Characteristic
Color:	Clear. Colorless
Pour Point:	-15 to 15°C
Specific Gravity:	0.879 to 0.906
Solubility:	Insoluble in cold water, hot water.
Viscosity:	kinematic: 70 to 2700 cSt at 100 °C SUS: 341 to 11650 SUS at 100 °C
SECTION 10. STABILITY AND REACTIVITY	
Stability and Reactivity:	Stable under recommended storage and handling conditions.
Conditions to avoid:	Keep away from sources of ignition. Keep away from heat, sparks and flame. Depolymerizes at temperatures above 250C.
Incompatibility with Various Substances:	Strong oxidizing agents; acidic clays at > 100C.

Hazardous Decomposition Products:	Products of Combustion; carbon oxides (CO, CO ₂)
Hazardous Polymerization:	Will not occur.
SECTION 11. TOXICOLOGICAL INFORMATION	
Acute toxicity:	Similar materials were practically non-toxic when tested in acute oral (rat LD ₅₀ > 34,600 mg/kg), dermal (rabbit LD ₅₀ > 10,250 mg/kg). A range of similar materials have been tested for eye and skin irritation. For eye irritation, none of these materials have produced scores exceeding 8.0 out of a possible total of 110 with complete disappearance of effects in 72 hours (rabbits). Consequently these materials are expected to be mildly irritating to the eyes. When applied to the skin of rabbits similar materials scored 1.5 out of a possible total of 8.0, indicating that this product may be a slight skin irritant.
SECTION 12. ECOLOGICAL INFORMATION	
Ecotoxicity:	>1000 mg/l [LC ₅₀ , (WSF) Nominal Concentration, similar material], 96 hours [Fish (Trout)]. >1000 mg/l [LC ₅₀ , (WSF) Nominal Concentration, similar material], 96 hours [(Minnows)]. >1000 mg/l [LC ₅₀ , (WSF) Nominal Concentration, similar material], 48 hours [(Daphnia)].
Persistence/Degradability:	This Product is unlikely to biodegrade at a significant rate.
Mobility:	This product is not likely to move rapidly with surface or groundwater flows because of its low water solubility of; <1000 ppm
Bioaccumulative Potential:	This product is not expected to bioaccumulate through food chains in the environment.
Other Ecological Information:	Aquatic studies of material with very low water solubility often refer to the amount of chemical added to the test system, not the amount dissolved in water. Most acute aquatic toxicity studies of these have used the water-accommodated fraction (WAF) obtained by mixing the test chemical in water for 20 to 24 hours, then siphoning the water for use in the test. The water-soluble fraction (WSF) is a similar approach. These materials are not expected to be adversely affect microbial activity. Following a modified OECD Method 209, bacterial inhibition using activated sludge microbes was tested with several grades of this material. The tests showed no bacterial inhibition at loadings of up to 25 mg/L, measured through oxygen consumption (respiration). In separate tests, the biological oxygen demand (BOD) of the microorganisms was measured. In these tests, there was no evidence of bacterial toxicity, even at loadings of about 200,000 mg/L. In addition, an epoxidized form of this material was found to be non-mutagenic and non-toxic to the microorganism used in the Ames mutagenicity assay, Salmonella typhimurium.

SECTION 13. DISPOSAL INFORMATION

Waste Information:	Waste must be disposed of in accordance with federal, state and local environmental control regulations. Empty container may contain harmful, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Labels should not be removed from containers until they have been cleaned.
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Consult your local or regional authorities.

SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	Proper Shipping Name	Class	Packing Group	Label
DOT Classification	UN3257	Elevated temperature liquid, n.o.s.	9	III	Not determined
TDG Classification	UN3257	Elevated temperature liquid, n.o.s.	9	III	Not determined
IMDG Classification	UN3257	Elevated temperature liquid, n.o.s. (Polybutene (Isobutylene/butene copolymer))	9	III	Not determined
IATA Classification	UN3257	Forbidden			Not determined

Nonbulk Shipping Information

D O T Nonbulk Shipping Information:	When this material is shipped at temperatures <100C this material is not regulated for transport.
T D G Nonbulk Shipping Information:	When this material is shipped at temperatures <100C this material is not regulated for transport.
IMDG Nonbulk Shipping Information:	When this material is shipped at temperatures <100C this material is not regulated for transport.
IATA Nonbulk Shipping Information:	When this material is shipped at temperatures <100C this material is not regulated for transport.

SECTION 15. REGULATORY INFORMATION

U.S. Federal Regulations:	<p>US INVENTORY (TSCA): In compliance.</p> <p>SARA Title III Section 302 Extremely Hazardous Substances (40 CFR Part 355): This product is not regulated under Section 302 of SARA and 40 CFR Part 355.</p> <p>SARA Title III Sections 311/312 Hazardous Categorization (40 CFR Part 370): Defined as non-hazardous by OSHA under 29 CFR 1910.1200(d).</p> <p>SARA 313 toxic chemical notification and release reporting: No products were found.</p>
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	CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4): This material is not regulated under CERCLA Sections 103 and 107.
State Regulations:	No Products were found. California prop. 65: No products were found.
Inventories:	AUSTRALIAN INVENTORY (AICS): In compliance. CANADA INVENTORY (DSL): In compliance. CHINA INVENTORY (IECS): In compliance. EC INVENTORY (EINECS): In compliance. JAPAN INVENTORY (ENCS): In compliance. KOREA INVENTORY (ECL): In compliance. PHILIPPINE INVENTORY (PICCS): In compliance.
SECTION 16. OTHER INFORMATION	
Label Requirements:	CAUTION! This Product has been evaluated and does not require any hazard warning on the label under established regulatory criteria.
Hazardous Material Information System (U.S.A.):	Heath- 0 Fire Hazard- 1 Instability- 0 Personal Protection- C

Prepared by:	Lilyana Flores
DATE: 12/2/03	SUPERSEDES: 11/6/03

Disclaimer

NOTICE: This Material Safety Data Sheet (MSDS) conforms to the requirements of OSHA 29 CFR Part 1910 and State of California CCR Title 8, and the recommendations in ANSI Z400.1. The information it contains is offered in good faith as accurate. We have reviewed the information contained in this MSDS which we received from sources outside our company. We believe that information to be correct, but we make no representations as to the accuracy or completeness thereof. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. We disclaim any liability for damage or injury which results from the use of the above information and nothing contained therein shall constitute a guarantee, warranty (including warranty of merchantability) or representation (including freedom from any patent liability) by us with respect to the information, the product described, or their use for any specific purpose, even if that purpose is known to us. In no event will we be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information.