

MATERIAL SAFETY DATA SHEET
U.S. and Canada

IDENTIFICATION SECTION

PRODUCT NAME: BYK-410

HMIS: 2*20 B
WHMIS: B3,D2A,D2B

MANUFACTURER: BYK-Chemie USA Inc.
524 South Cherry Street, Wallingford, CT 06492

CHEMICAL FAMILY: Urea urethane
NJ TSRN:800963-5275

USE: Additive for paints and plastics

PREPARATION INFORMATION

PREPARED BY: Joanne Nole, Safety and Training Specialist

TELEPHONE: 203-265-2086

REVISION DATE: 01/01/2004

For regulatory information, see the product's Regulatory Information Data Sheet (RIDS). Web site: www.byk-chemie.com (download MSDS)

HAZARDOUS INGREDIENTS

CAS NUMBER	% (Wt)	CHEMICAL NAME	TLV (ACGIH) [ppm]	STEL (ACGIH) [ppm]	PEL (OSHA) [ppm]	CARCIN- OGEN	LD50 (oral, rat) [mg/kg]
7447-41-8	2	Lithium chloride [LiCl]	-	-	-	no	526
872-50-4	48	1-Methyl-2-pyrrolidone [NMP]	[10] skin	-	-	no	3600

[] = AIHA (WEEL-TWA)

NON-HAZARDOUS INGREDIENTS

Information concerning non-hazardous ingredients is considered a Trade Secret

PHYSICAL DATA

BOILING RANGE (Solv.):	395-401°F (202-205°C)	SPECIFIC GRAVITY (H2O=1):	1.13 (20°C)
FREEZING POINT:	Not available	EVAPORATION RATE:	Not available
VAPOR DENSITY (AIR=1):	> 1	SOLUBILITY IN WATER:	Insoluble
VAPOR PRESSURE (@ 20 C):	< 1 mm Hg (estimated)	PH VALUE:	Not available
APPEARANCE:	Yellow liquid	WATER/OIL DISTRIBUTION COEFF.:	Not available
ODOR:	Amine-like	ODOR THRESHOLD:	Not available

FIRE AND EXPLOSION DATA

FLASH POINT:	196° F (91°C) Pensky-Martens (cc)	FLAMMABLE LIMITS (% Vol in air):	LEL= 1.3
AUTO IGNITION TEMPERATURE:	473° F (245° C) (solvent)		UEL= 9.5
EXTINGUISHING MEDIA:	Foam, carbon dioxide, or dry chemical		
HAZARDOUS COMBUSTION PRODUCTS:	Carbon mono/dioxide, nitrous oxides, chlorinated compounds		
SPECIAL FIRE FIGHTING PROCEDURES:	Wear full body protective clothing and self-contained breathing apparatus. Water spray may be used to keep fire exposed containers cool.		
FIRE AND EXPLOSION HAZARDS:	Keep away from heat and flames. Prevent static discharge. Keep away from oxidizing materials Will not explode upon mechanical impact.		

REACTIVITY DATA

STABILITY:	Stable; polymerization will not occur	CONDITIONS TO AVOID:	None known
INCOMPATIBILITY:	Strong oxidizing agents, strong acids/alkalis		
HAZARDOUS DECOMP. PRODUCTS:	None expected		

HEALTH HAZARD DATA

TOXICOLOGICAL DATA: LD50 (oral, rat) = > 5000 mg/kg (product)
Skin irritation (rabbit): Slight irritant (product) Eye irritation (rabbit): Irritant (product)
1-Methyl-2-pyrrolidone (NMP): LD50 (dermal, rabbit): 8000 mg/kg
Carcinogenicity, reproductive toxicity, teratogenicity, mutagenicity and sensitization of the product : Not Available

EXPOSURE LIMITS: Refer to Hazardous Ingredients Section

EFFECTS OF EXPOSURE:

Acute: Inhalation: None expected.
Eye: Contact will probably cause irritation.
Skin: Contact may cause irritation.
Ingestion: Ingestion may irritate the digestive tract.

Chronic: Prolonged absorption of Lithium Chloride may cause injury to the kidney and/or blood. Laboratory test results indicate Lithium Chloride may be teratogenic.

Reproductive and developmental studies in rats exposed to NMP showed effects including reduced fertility (male and female and reduced mean offspring body weight at birth and throughout lactation. Risk is significantly reduced when impervious gloves are used. Inhalation of NMP is not likely unless it is heated or sprayed. Prolonged skin contact with NMP may cause dermatitis.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: May be aggravating to some skin conditions, and to pre-existing kidney disorders.

ROUTES OF ENTRY: Inhalation: not likely Eye: possible
Skin: Contact-possible; Absorption-possible Ingestion: not likely

FIRST AID MEASURES

Inhalation: Remove to fresh air. Administer artificial respiration if necessary. Get medical aid as soon as possible.
Eye: Immediately flush with plenty of water for at least 20 minutes. Get medical aid.
Skin: Remove contaminated clothing. Wash thoroughly with soap and water.
Ingestion: Do not induce vomiting. Dilute with 1-2 glasses of water. Get medical aid.
Never give anything by mouth to an unconscious person.

PREVENTIVE MEASURES

PERSONAL AND SPECIAL PROTECTION INFORMATION:

RESPIRATORY: Unless air monitoring demonstrates dusts/mists/vapors are below the recommended exposure levels and/or WEEL, wear a properly fitted respirator (NIOSH) or dust mask during exposure.

VENTILATION: Local exhaust recommended.

EYE PROTECTION: Safety glasses; goggles recommended

GLOVES: Butyl rubber or Nitty Gritty(R) recommended.

OTHER EQUIPMENT: Clean long legged, long sleeved work clothes.

WORK PRACTICES: Use in accordance with good industrial hygiene and safety practices.

SPILL OR LEAK PROCEDURES:

Eliminate all sources of ignition. Ventilate area if indoors. Wear self-contained breathing apparatus and full protective clothing. Stop leak. Dike and contain spill. Pump into salvage tanks and/or absorb with suitable material. Use sparkless shovels to remove material.

WASTE DISPOSAL:

U.S.A.: Dispose of in accordance with applicable local, state and federal regulations.

Canada: Dispose of in accordance with applicable municipal, provincial and federal regulations.

STORAGE AND HANDLING PRECAUTIONS:

HARMFUL if absorbed through skin. Avoid skin and eye contact. Avoid breathing mists or vapors from heated products.

Avoid heat, flame, sources of ignition. Take precautionary measures against static discharge.

Handle as an industrial chemical. Keep container tightly closed when not in use. Keep away from strong oxidizing materials.

Keep away from strong acids and alkalis.

* * * * * END OF MSDS * * * * *

REGULATORY INFORMATION DATA SHEET (RIDS)

Product Name: BYK-410	HMIS: 2*20 B
Manufacturer: BYK-Chemie USA Inc. P.O. Box 5670, 524 South Cherry Street Wallingford, CT USA 06492-7651	NFPA Class: III A Flash Point: 196° F Pensky-Martens (cc) Revision Date: 01/01/2004 Supersedes: 05/15/2002
Prepared By: Megan McCutcheon, EHS Manager	Telephone: 203-265-2086 / www.byk-chemie.com
Contacts: Regulatory Info: EHS Secretary - ext 3227	Documents: Customer Svc. - ext 3257 or 3206

United States Federal Laws

EPCRA -- EMERGENCY PLANNING COMMUNITY RIGHT-TO-KNOW

[also known as Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)]

Section 302/304 Extremely Hazardous Substances/Release Reporting: Not applicable

Section 311 Hazard Category (e.g., Acute, Chronic, Fire, Reactive, Pressure): Acute, Chronic, Fire

Section 313 Toxic Chemical -- Supplier Notification:

This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372. This supplier notification must be attached and remain attached to the product's Material Safety Data Sheet (MSDS), and if copies of the MSDS are redistributed, this supplier notification must be attached.

Chemical/Category	CASRN	Weight Percent in Product
1-Methyl-2-pyrrolidone	872-50-4	48

TSCA - TOXIC SUBSTANCES CONTROL ACT

TSCA Inventory: BYK-Chemie USA Inc. certifies that all of the components of this product are either listed on the TSCA Inventory or are not subject to the notification requirements (exempt).

Section 5 Rules or Orders: Not applicable

Section 6 Regulation of Existing Chemicals: Not applicable

Section 7 Imminent Hazards: Not applicable

Section 4 Test Rules / Section 12 Export Notification**:
n-Methylpyrrolidone 872-50-4 Section 4

DOT - US DEPARTMENT OF TRANSPORTATION CLASSIFICATION

Proper Shipping Name	Not Regulated		
Hazard Class:	-	Primary Label:	-
ID Number:	-	Subsidiary Label:	-
Packing Group:	-	ERG Page Number:	-
Technical Names:	-		
CERCLA RQ:	-	Emergency Contact:	CHEMTREC 1-800-424-9300
RQ Substance:	-	RQ Pounds:	-

[Container sizes: 55 gallon drums; 5 gallon pails; 2 oz. and 16 oz. samples]

CLEAN AIR ACT & RELATED INFORMATION

Non-volatile percent (range)*: 50.0 - 58.0 Method: ISO 3251, 20 min. @ 175°C

Ozone Depleting Substances: Not applicable

Hazardous Air Pollutants**: Not applicable

* Non-volatile information is not a specification.

** NOTE: Refer to the MSDS for percentages. HAP is listed if in product at 1% or 0.1% or greater.

RCRA - RESOURCE CONSERVATION AND RECOVERY AUTHORIZATION ACT

EPA Hazardous Waste Code(s): Not Applicable

FOOD, DRUGS AND COSMETICS ACT -- INDIRECT FOOD ADDITIVES (21 CFR)

Not Applicable

STATE LAWS

California Safe Drinking Water and Toxic Enforcement Act of 1986 -- Proposition 65

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.
Contains: n-Methylpyrrolidone

New Jersey Trade Secret Registry Number for the product (NJTSRN): 800963-5275

CONEG Heavy Metal: BYK-Chemie USA certifies that this product does not contain Lead, Mercury,
Cadmium or hexavalent chromium in the sum concentration of 100 ppm by weight or greater.

CANADIAN LAWS/REGULATIONS

DSL - Domestic Substance List: BYK-Chemie USA certifies that all of the components of this product
are listed on the DSL

WHMIS Classification: Refer to the Identification Section of the product's MSDS, where applicable.

WHMIS Trade Secret Registry Number: Refer to the Hazardous Ingredient Section of the product's MSDS, where applicable.

Transportation of Dangerous Goods (TDG): Refer to the U.S. DOT Classification and to the TDG Regulations.

NATIONAL INVENTORIES

U.S. Toxic Substances Control Act (TSCA): Refer to U.S. Federal Laws Section
Canadian Domestic Substance List (DSL): Refer to Canadian Laws/Regulations Section

For other National Inventories, either contact the EHS Secretary or download the 'Product Information Sheet' from our
web site - www.byk-chemie.com.

INFORMATION CHANGED: CEPA DSL Status

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