

Material Safety Data Sheet

Revision: 10/26/2004



Hazard information is provided for compliance with both the UK Chemicals (Hazard Information and Packaging) (CHIP) Regulations and the US Hazard Communication Standard (HCS)

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

PRODUCT NAME:
X-GAL-IPTG Solution

PRODUCT CODE:
26205

EEC NUMBER:
212-828-1
N-Methyl-2-
Pyrrolidone

SUPPLIER:

USB Corporation, 26111 Miles Road, Cleveland, Ohio 44128 Phone: (216) 765-5000
Please visit our website at www.usbweb.com for contact information on USB product distributors within your area.

Emergency Contact:

Chemtrec (800) 424-9300
Outside USA & Canada 703 527 3887

COMPOSITION/HAZARDOUS COMPONENTS

HAZARD

CAS NO.

%WT

TLV

CHIP R & S Phrases

N-Methyl-2-Pyrrolidone

872-50-4

70 -100%

R:36/38 Irritating to eyes and skin.
S:41 In case of fire and/or explosion do not breathe fumes.

HAZARDS IDENTIFICATION

CHIP

Irritant

HCS

Irritant, Combustible Liquid

FIRST-AID MEASURES

EYES: Flush with water for 15 minutes. Seek medical advice if irritation persists.

SKIN: Flush with water, then wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse. Seek medical attention if irritation persists.

INHALATION: Remove the victim from exposure and move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Seek immediate medical attention.

INGESTION: Drink water and seek immediate medical attention. Avoid alcoholic beverages. Never give anything by mouth to an unconscious person.

FIRE-FIGHTING INFORMATION

Use media suitable to extinguish the supporting or surrounding fire. Wear NIOSH (or equivalent) approved self contained breathing apparatus. For small fires only: use carbon dioxide, dry powder or foam. Emits toxic fumes under fire conditions. Combustible liquid and vapor. Slightly flammable to flammable in presence of open flames, sparks, and static discharge. NFPA Rating: H = 1 F = 1 R = 0.

Flash Point for the mixture = 76°C (168.8°F). Flash Point for N-Methyl-2-Pyrrolidone = 91°C.

ACCIDENTAL RELEASE MEASURES

Wear appropriate personal protective equipment and clothing including lab coat, safety goggles, gloves and NIOSH-approved (or equivalent) respirator and appropriate to the hazard. Contain the spill with an inert absorbent and place in a suitable waste container. Avoid contact of material with skin or eyes. Use adequate ventilation. Keep away from heat and sources of ignition.

HANDLING AND STORAGE

Wear suitable protective clothing including lab coat, chemical resistant safety glasses, goggles and NIOSH-approved (or equivalent) respirator. Avoid contact of material with skin or eyes. Store at +4°C in tightly closed container away from incompatible material. Avoid all possible sources of ignition (spark or flame). Use adequate ventilation.

PERSONAL PROTECTION

Wear appropriate personal protective equipment and clothing including lab coat, safety goggles, gloves and NIOSH-approved respirator. A qualified industrial hygienist should evaluate the need for respiratory protection. Use respiratory protection approved by NIOSH (or equivalent) and appropriate to the hazard. Avoid contact of material with skin or eyes. Mechanical ventilation or local exhaust as needed to control exposure to dust, vapors or mists. Access to a safety shower and eye-wash.
HMIS Rating: H = 1 F = 1 R = 0

PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear liquid
Vapor Pressure: 0.08 mm Hg @ 20°C lowest value
Solubility (Water): Slightly soluble
Percent Volatile: 100
Chemical Formula: No data available

Vapor Density: 3.4
Specific Gravity: 1.030 (N-Methyl-2-Pyrrolidone)
Evaporation Rate: 0.06 compared to Butyl Acetate
Melting Point: May start to solidify at 0°C
Boiling Point: weighted average = 191.7°C

STABILITY AND REACTIVITY

Product is stable under recommended storage conditions. Keep containers tightly closed to avoid exposure to air or moisture. Hazardous decomposition products include oxides of carbon and nitrogen. Incompatible with strong acids, oxidizing agents and alkalis. Hazardous polymerization will not occur.

TOXICOLOGICAL INFORMATION**EFFECTS OF OVEREXPOSURE:**

EYES: Contact causes eye irritation. May cause temporary corneal clouding.

SKIN: Contact causes irritation. May be harmful if absorbed through the skin. Skin inflammation is characterized by itching, scaling reddening or occasional blistering. May be harmful if absorbed through the skin. Avoid prolonged exposures.

INHALATION: May cause irritation to upper respiratory tract. Symptoms of exposure may include burning sensation and headache.

INGESTION: May cause irritation of the gastrointestinal tract. Symptoms of exposure may include nausea, vomiting and diarrhea.

ADDITIONAL INFORMATION:

Prolonged or repeated skin contact may cause dermatitis. Adverse reproductive effects have been reported in animals.

Irritation, toxicity, tumorigenic, reproductive and mutation data for N-Methyl-2-Pyrrolidone listed in RTECS under UY5790000. Only select RTECS information is provided here. Please see actual RTECS entry for complete information.

Oral Rat LD50 = 3914 mg/kg (1976). Details of toxic effects not reported other than lethal dose value.

Irritation data: Standard Draize test administered into the eye (Rodent-rabbit) = Moderate (1988).

Tumorigenic data: Oral Mouse TDLo = 784 gm/kg/78W-C. Carcinogenic by RTECS criteria.

Reproductive data: Oral Rat TDLo = 9700 mg/kg. Effects on embryo or fetus included fetal death and developmental abnormalities.

Definition(s): RTECS = Registry of Toxic Effects of Chemical Substances.

ECOLOGICAL INFORMATION

No information available.

DISPOSAL CONSIDERATIONS

Dispose of material in accordance with applicable local, state, and federal regulations.

TRANSPORTATION INFORMATION

US DOT / IATA: Combustible liquids, n.o.s. (N-Methyl-2-Pyrrolidone), class 3, NA1993, PG III, Label: N/A

REGULATORY INFORMATION

RCRA - No applicable information.

SARA 302 - This material does not have an RQ or TPO.

SARA 313 - This material contains N-Methyl-2-Pyrrolidone which is subject to the reporting requirements of Section 313 of SARA Title II and 40 CFR Part 373.

EPA TSCA Section 8(b) - Chemical Inventory (components listed).

Exposure Limits - Not established.

California Proposition 65 - This product contains N-Methyl-2-Pyrrolidone, a chemical known to the state of California to cause birth defects or other reproductive harm.

State Right to Know: CAS# 872-50-4 can be found on the state right to know lists of Pennsylvania, Minnesota, and Massachusetts.

This data sheet is based upon information believed to be reliable. The Company makes no statement or warranty as to the accuracy or completeness of the information contained herein which is offered for your consideration, investigation and verification. Any use of the information contained in this data sheet must be determined by the user to be in accordance with appropriate applicable regulations.