



# MATERIAL SAFETY DATA SHEET

KEM CANADA MFG.  
4 BLAIR DRIVE  
BRAMPTON, ONTARIO  
L6T 2H5  
TEL# (905) 456-9444

EMERGENCY # CANUTEC (613) 996-6666  
**"USE IN CASE OF CHEMICAL EMERGENCY ONLY"**

W.H.M.I.S. CLASSIFICATION: B3, D1B, E

MATERIAL REFERENCE NO: 574100

## SECTION I - MATERIAL IDENTIFICATION AND USE

MATERIAL NAME/I.D.: RT-741	
CHEMICAL NAME: NOT APPLICABLE	CHEMICAL FAMILY: ALKALINE BLEND
CHEMICAL FORMULA: MIXTURE	MOLECULAR WEIGHT: NOT APPLICABLE
SYNONYMS: NONE	
MATERIAL USE: RETURN LINE TREATMENT	

## SECTION II - HAZARDOUS INGREDIENTS OF MATERIAL

HAZARDOUS   INGREDIENTS	APPROX.   % CONCENT.	TLV   PPM	C.A.S.   NUMBERS	LD 50   ORAL, RAT
MORPHOLINE	10.0-30.0	20	110-91-8	1450 MG/KG

## SECTION III - PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: LIQUID		
ODOUR AND APPEARANCE: CLEAR, COLOURLESS LIQUID; AMINE ODOUR.		
ODOUR THRESHOLD (PPM)	SPECIFIC GRAVITY	VAPOUR PRESSURE (MM)
0.1	1.001	NOT AVAILABLE
VAPOUR DENSITY (AIR=1)	EVAPORATION RATE	SOLUBILITY IN WATER
NOT ESTABLISHED	(WATER = 1) 1.0	(20°C) COMPLETE
BOILING POINT (C)	FREEZING POINT (C)	% VOLATILE (BY WEIGHT)
>100 (EST.)	<0	100
pH (10% SOLUTION)	DENSITY (G/ML)	COEF.OF WATER/OIL DISTR
10.5-11.5	NOT APPLICABLE	NOT AVAILABLE



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## SECTION IV - FIRE AND EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: FLAMMABLE			
IF YES, UNDER WHICH CONDITIONS: VAPOURS MAY BE FLAMMABLE.			
MEANS OF EXTINCTION: ALCOHOL FOAM, CO2, WATER SPRAY, DRY CHEMICAL.			
SPECIAL PROCEDURES: WEAR FULL PROTECTIVE GEAR INCLUDING SELF-			
CONTAINED BREATHING APPARATUS. VAPOURS ARE HEAVIER THAN AIR AND MAY			
TRAVEL TO IGNITION SOURCE AND FLASH BACK.			
FLASH POINT (C) AND METHOD: MINIMUM 35 TCC			
HAZARDOUS COMBUSTION PRODUCTS: MAY EVOLVE NITROGEN OXIDES, CARBON			
DIOXIDE, CARBON MONOXIDE, AMMONIA, ALDEHYDES, KETONES, IRRITATING			
VAPOURS.			
UPPER EXPLOSION LIMIT   LOWER EXPLOSION LIMIT   AUTOIGNITION TEMP (C)			
1.8 (MORPHOLINE)   10.8 (MORPHOLINE)   NOT AVAILABLE			
EXPLOSION DATA SENSITIVITY   RATE OF BURNING   EXPLOSIVE POWER			
TO CHEMICAL IMPACT			
NOT AVAILABLE   NOT AVAILABLE   NOT AVAILABLE			
SENSITIVITY TO STATIC DISCHARGE: NOT AVAILABLE			

## SECTION V - REACTIVITY DATA

CHEMICAL STABILITY: STABLE			
IF NO, UNDER WHICH CONDITIONS:			
INCOMPATIBILITY TO OTHER SUBSTANCES: YES			
IF SO, WHICH ONES: STRONG ACIDS, OXIDIZING AGENTS, NITRITES AND			
OTHER NITROSATING AGENTS.			
REACTIVITY AND UNDER WHAT CONDITIONS: NITROSAMINE MAY BE FORMED WHEN			
MIXED WITH NITRITES OR OTHER NITROSATING AMINES. NITROSAMINES MAY			
CAUSE CANCER.			
HAZARDOUS POLYMERIZATION WILL NOT OCCUR.			
HAZARDOUS DECOMPOSITION PRODUCTS: NITROUS OXIDES, CARBON MONOXIDE,			
CARBON DIOXIDE, AMMONIA, ALDEHYDES, KETONES, IRRITATING VAPOURS.			

## SECTION VI - HEALTH HAZARD DATA

ROUTE OF ENTRY:			
SKIN CONTACT: YES SKIN ABSORPTION: YES EYE CONTACT: YES			
INHALATION: YES INGESTION: YES			



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|EFFECTS OF ACUTE EXPOSURE TO MATERIAL: |  
|EYES-MAY CAUSE SEVERE IRRITATION, INTENSE WATERING, REDNESS. MAY |  
|CAUSE CHEMICAL BURNS, EYE DAMAGE. |  
|SKIN-MAY CAUSE IRRITATION, INFLAMMATION, REDNESS, POSSIBLE BURNS. |  
|PROLONGED OR REPEATED CONTACT MAY RESULT IN ABSORPTION OF POTENTIALLY |  
|HARMFUL AMOUNTS. |  
|INHALATION-MAY CAUSE IRRITATION OF NOSE, EYES AND THROAT, COUGHING, |  
|DIFFICULTY IN BREATHING. EXCESSIVE INHALATION MAY CAUSE BRONCHITIS, |  
|PULMONARY EDEMA AND CHEMICAL PNEUMONITIS. |  
|INGESTION-MAY CAUSE IRRITATION AND BURNING SENSATION OF LIPS, MOUTH |  
|AND THROAT, PAIN IN SWALLOWING, GASTRO-INTESTINAL IRRITATION, |  
|ABDOMINAL PAIN, NAUSEA AND VOMITING. |  
|

|EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: PROLONGED EXPOSURE MAY |  
|CAUSE KIDNEY AND/OR LIVER DAMAGE. |

|LD 50 OF MATL. |LC 50 OF MATL. |EXPOSURE LIMIT(S) |IRRITANCY OF MATL |  
| NOT AVAILABLE | NOT AVAILABLE | NOT AVAILABLE | TOXIC |

|SENSITIZATION OF MATERIAL | SYNERGISTIC MATERIALS |  
| NOT AVAILABLE | NOT AVAILABLE |

|CARCINOGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY, MUTAGENICITY |  
|NONE KNOWN. |  
|MORPHOLINE MAY REACT WITH NITRITES TO FORM N-NITROSAMINES (KNOWN |  
| CARCINOGENS) |  
|

## SECTION VII - PREVENTIVE MEASURES

|PERSONAL PROTECTIVE EQUIPMENT: |

ITUMONICARIN-BB-ES



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## SECTION VIII - FIRST AID MEASURES

| PROCEDURES: EYES-IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR AT  
| LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET IMMEDIATE MEDICAL  
| ATTENTION.  
| SKIN-REMOVE CONTAMINATED CLOTHING AND FLUSH AFFECTED AREA WITH  
| WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION. LAUNDER  
| CLOTHING BEFORE REUSE.  
| INHALATION-MOVE VICTIM TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE  
| OXYGEN. GET MEDICAL ATTENTION.  
| INGESTION-DO NOT INDUCE VOMITING. SLOWLY GIVE 1-2 GLASSES OF WATER  
| OR MILK. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR  
| CONVULSING PERSON. GET IMMEDIATE MEDICAL

| SOURCES USED: RAW MATERIAL SUPPLIER'S MATERIAL SAFETY DATA SHEETS

| ADDITIONAL INFORMATION: NONE

## SECTION IX - TDG SHIPPING INFORMATION

SHIPPING NAME	CLASS	UN NO.	PG
CORROSIVE LIQUID, FLAMMABLE, N.O.S. (MORPHOLINE)	8(3)	2920	II

| HANDLING PROCEDURES AND EQUIPMENT: AVOID CONTACT WITH EYES, SKIN AND  
| CLOTHING. USE IN ADEQUATELY VENTILATED AREAS. WASH THOROUGHLY AFTER  
| HANDLING.

| STORAGE REQUIREMENTS: STORE IN A COOL, DRY WELL VENTILATED AREA IN  
| ORIGINAL CONTAINER. STORE AWAY FROM INCOMPATIBLE MATERIALS. KEEP  
| CONTAINER CLOSED WHEN NOT IN USE.

| SPECIAL SHIPPING INFORMATION: NONE

## SECTION X - HMIS HAZARD RATING INFORMATION

FLAMMABILITY	REACTIVITY	HEALTH
3	0	2

## SECTION XI - PREPARATION DATE OF MSDS

| PREPARED BY: TECHNICAL DEPARTMENT      TELEPHONE # (905) 456-9444

| REVIEWED:      OCTOBER 10, 2009

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