



DOW CHEMICAL U.S.A.

January 27, 1983

PARK EIGHTY PLAZA EAST
SADDLE BROOK, NEW JERSEY 07662

201-845-5000

Norm -

*I'm company (L) att. L.P. Dow spec
with our current Q.C. acceptance program to
be sure we are current.*

Mr. E. F. Krainer - D1243
Corporate Purchasing Agent
Chemicals and Plastics Group
UNION CARBIDE CORPORATION
Old Ridgebury Road
Danbury, Connecticut 06817

ELK

Y28/K3

RECEIVED

VINYL CHLORIDE MONOMER SALES SPECIFICATION
UCC AGREEMENT NO. AC100-59438 - 11/28/67

CHEM. PURCHASING

Dear Ed:

Here is the Dow VCM sales specification. We have also included our Material Safety Data Sheet. From our experience, Dow VCM appears to set an industry standard for quality.

We have asked your permission to ship VCM at our option from B. F. Goodrich's LaPorte, Texas facility. A trade-out opportunity exists for Dow and would save us freight costs versus shipping from Plaquemine, Louisiana. The B. F. Goodrich VCM sales specifications are:

Item	Limit
VCM	99.96%
HCL	1 PPM
Acetylene	1 PPM
Acetaldehyde	1 PPM (not listed in Dow spec)
Water	100 PPM
Sulfur	1 PPM (not listed in Dow spec)
Iron	0.4 PPM
Non-Volatiles	50 PPM
Methyl Chloride	60 PPM (Dow 40 PPM)
Butadiene	8 PPM (Dow 2 PPM)

You indicated that you would prefer not to take VCM from LaPorte, Texas at this time. It's our understanding that B. F. Goodrich's typicals show tighter limits than the sales specs. If U.C.C. would advise us which sales spec items are objectionable, we could get these better defined.

Thank you for considering this request and we look forward to your reply.

Sincerely,

Jack

J. L. Stumpfig
Corporate Account Manager

AN OPERATING UNIT OF THE DOW CHEMICAL COMPANY

km

*Jim: attached for
entire MSD sheet
for your review
2/11/83*

THE DOW CHEMICAL COMPANY QUALITY ASSURANCE
SALES SPECIFICATION

91575

PAGE: 1

PRODUCT CODE: 91575

EFFECTIVE: 27 DEC 79 SUPERSEDES: 2 FEB 77

NAME: VINYL CHLORIDE MONOMER

DESC: COLORLESS, FLAMMABLE COMPRESSED GAS

TEST ITEM	: UNIT :	LIMITS	: TEST METHODS
PURITY, MIN	WT %	99.99	91575
ACETYLENE, MAX.	WT PPM	1	91575
1,3 BUTADIENE, MAX.	WT PPM	2	91575
METHYL CHLORIDE, MAX.	WT PPM	40	91575
1,2 DICHLOROETHANE (EDC), MAX.	WT PPM	1	91575
VINYL ACETYLENE, MAX	WT PPM	5	91575
TOTAL OTHER CHLORINATED OR NON-CHLORINATED			
HYDROCARBONS, MAX.	WT PPM	25	91575
WATER, MAX. (SEE NOTE 2)	WT PPM	100	91575
ACIDITY (AS HCL), MAX.	WT PPM	1	91575
IRON, NON FILTERABLE, MAX.	WT PPM	.15	91575
NON VOLATILE RESIDUE, MAX. (SEE NOTE 2)	WT PPM	25	91575
OXYGEN IN VAPOR SPACE OF SHIPPING TANK, MAX. (SEE NOTES 1&2)	VOL PPM	1000	91575

PI: 1190396 BULK

SALES NOTE:

- (1) 1000 PPM BY VOLUME - 500 PPM BY WEIGHT.
- (2) NOT INCLUDED ON THE PURITY DETERMINATION.

READ PRECAUTIONARY INFORMATION AND MATERIAL SAFETY DATA
SHEETS. THIS PRODUCT IS SHIPPED IN COMPLIANCE WITH AP-
PLICABLE LAWS AND REGULATIONS REGARDING CLASSIFICATION,
PACKAGING, SHIPPING, AND LABELING.

(R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY
LAST PAGE

UCC
059410

M A T E R I A L S A F E T Y D A T A S H E E T P A G E : 1
DOW CHEMICAL U.S.A. MIDLAND MICHIGAN 48640 EMERGENCY PHONE: 517-636-4400

EFFECTIVE DATE: 27 JUN 80

PRODUCT CODE: 91575

PRODUCT NAME: VINYL CHLORIDE MONOMER

MSD: 0664

INGREDIENTS (TYPICAL VALUES-NOT SPECIFICATIONS) : % :
VINYL CHLORIDE : 99.9 :
: : :

SECTION 1

PHYSICAL DATA

BOILING POINT: -13.8C (+7.16F) : SOL. IN WATER: 20C. 0.25 WT.% @1 ATM
VAP PRESS: 2524 MMHG, 336 KPA @ 20C: SP. GRAVITY: 0.9104 @ 20/20C, 68F
VAP DENSITY (AIR=1): 2.15 : % VOLATILE BY VOL: 100

APPEARANCE AND ODOR: COLORLESS GAS OR LIQUID UNDER PRESSURE - FAINT,
SWEET ODOR.

SECTION 2

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: -78C (-108.4F) : FLAMMABLE LIMITS
METHOD USED: CLEVELAND OPEN CUP : LFL: 3.6 VOL. % UFL: 33.0 VOL %

EXTINGUISHING MEDIA: FOR CONTAINMENT OF FIRE AND PROTECTION OF
SURROUNDING EQUIPMENT ONLY. WATER FOG, FOAM, CO2, DRY CHEMICAL.

SPECIAL FIRE FIGHTING EQUIPMENT AND HAZARDS: SELF-CONTAINED BREATHING
APPARATUS. VAPORS CAN FORM FLAMMABLE MIXTURES WITH AIR AT ALL
NORMAL AMBIENT TEMPERATURES. ALL SOURCES OF POSSIBLE IGNITION
SHOULD BE AVOIDED IN AREAS WHERE VINYL CHLORIDE VAPORS ARE PRESENT.
IGNITION TEMPERATURE 472C (882F).

SECTION 3

REACTIVITY DATA

STABILITY: AVOID EXPOSURE TO AIR, OXYGEN, SUNLIGHT, MOISTURE, AND
ALL SOURCES OF HEAT OR IGNITION. IGNITES IN AIR AT 472C (882F).

INCOMPATIBILITY: OXIDIZING MATERIAL, COPPER OR COPPER ALLOYS, ALUMINUM
OR ALUMINUM ALLOYS.

HAZARDOUS DECOMPOSITION PRODUCTS: HYDROGEN CHLORIDE, CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: MAY OCCUR. AVOID EXPOSURES TO
OXYGEN (AIR), HEAT, SUNLIGHT, MOISTURE, AND FREE RADICAL INITIATORS
OR OTHER CATALYTIC IMPURITIES.

(CONTINUED ON PAGE 2)

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DOW CHEMICAL U.S.A. MIDLAND MICHIGAN 48640 EMERGENCY PHONE: 517-636-4400

EFFECTIVE DATE: 27 JUN 80
PRODUCT (CONT'D): VINYL CHLORIDE MONOMER

PRODUCT CODE: 91575
MSD: 0664

SECTION 4 SPILL, LEAK, AND DISPOSAL PROCEDURES

ACTION TO TAKE FOR SPILLS: REMOVE
ALL SOURCES OF IGNITION; SUPPLY AMPLE VENTILATION, ALLOW ONLY
PROPERLY PROTECTED PERSONNEL INTO THE AREA; DO NOT ALLOW VINYL
CHLORIDE TO ENTER THE SEWER SYSTEM BECAUSE OF EXPLOSIVE HAZARD.

DISPOSAL METHOD: INCINERATE IN EQUIPMENT WITH A HYDROCHLORIC ACID
SCRUBBER ACCORDING TO LOCAL, STATE, AND FEDERAL REGULATIONS. CONTACT
THE DOW CHEMICAL COMPANY FOR ADDITIONAL HELP.

SECTION 5 HEALTH HAZARD DATA

EYE: GAS - NOT LIKELY TO CAUSE ILL EFFECTS. LIQUID - CAPABLE OF
CAUSING FROSTBITE-TYPE BURNS.

SKIN CONTACT: GAS - NOT LIKELY TO CAUSE IRRITATION.
LIQUID - CAPABLE OF CAUSING FROSTBITE-TYPE BURNS.

SKIN ABSORPTION: NOT ABSORBED THROUGH SKIN IN PURE FORM.

INGESTION: NOT CONSIDERED A PROBLEM BECAUSE PRODUCT IS A GAS AT AMBIENT
TEMPERATURES.

INHALATION: OSHA STANDARD TWA - 1 PPM (1977). MAXIMUM AVERAGE OVER
ANY 15 MINUTE PERIOD - 5 PPM; ACGIH TLV 5 PPM.

SYSTEMIC & OTHER EFFECTS: CANCER SUSPECT AGENT.

SECTION 6 FIRST AID

EYES: IRRIGATE WITH FLOWING WATER IMMEDIATELY AND CONTINUOUSLY FOR
15 MINUTES. REFER TO MEDICAL PERSONNEL.

SKIN: WASH IN FLOWING WATER (SHOWER) FOR 15 MINUTES. REMOVE CLOTHES
AND DECONTAMINATE BEFORE REUSE.

INGESTION: UNLIKELY, SINCE PRODUCT IS A GAS AT AMBIENT TEMPERATURES.

INHALATION: REMOVE TO FRESH AIR. MAY CAUSE DRUNKENNESS OR LOSS OF
CONSCIOUSNESS. GIVE MOUTH TO MOUTH RESUSITATION IF BREATHING STOPS.
CALL A PHYSICIAN AND/OR TRANSPORT TO MEDICAL FACILITY.

NOTE TO PHYSICIAN: EXPOSURE TO HIGH LEVELS OF SHORT DURATION CAN CAUSE
NARCOTIC OR INTOXICATIVE EFFECTS AND/OR ANESTHESIA. MAY CAUSE
NAUSEA OR VOMITING. LONG-TERM EFFECTS: HAS BEEN FOUND TO BE
CARCINOGENIC, (REPEATED EXPOSURE TO HIGH LEVELS).

(CONTINUED ON PAGE 3)

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EFFECTIVE DATE: 27 JUN 80
PRODUCT (CONT'D): VINYL CHLORIDE MONOMER

PRODUCT CODE: 91575
MSD: 0664

SECTION 7 SPECIAL HANDLING INFORMATION

VENTILATION: RECOMMEND CONTROL OF VAPORS TO SUGGESTED GUIDE.

RESPIRATORY PROTECTION: NIOSH APPROVED RESPIRATORY PROTECTION REQUIRED
IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. FOR EMERGENCIES, A SELF-
CONTAINED BREATHING APPARATUS OR A FULL-FACE RESPIRATOR AS APPROVED
BY NIOSH IS RECOMMENDED.

PROTECTIVE CLOTHING: NONE REQUIRED. RESCUE HARNESS AND LIFELINE FOR
ENTERING TANKS OR ENCLOSED STORAGE SPACE.

EYE PROTECTION: SAFETY GLASSES WITHOUT SIDE SHIELDS. EYEWASH STATIONS
AND SAFETY SHOWERS SHOULD BE READILY AVAILABLE.

SECTION 8 SPECIAL PRECAUTIONS AND ADDITIONAL INFORMATION

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: STORAGE SHOULD BE IN
AN ISOLATED, WELL-VENTILATED AREA. PITS, DEPRESSIONS, AND BASEMENTS
SHOULD BE AVOIDED.

AVOID ALL SKIN AND EYE CONTACT. AVOID BREATHING VAPORS. VINYL
CHLORIDE SHOULD ALWAYS BE HANDLED WITH FULL RECOGNITION OF ITS
VOLATILITY AND ITS FLAMMABILITY. KEEP THE MATERIAL ENCLOSED AND
ELIMINATE ALL SOURCES OF IGNITION.

ADDITIONAL INFORMATION: 27 JUN 80 REVISIONS OF 05 OCT 78 --
SECTIONS 3, AND 5.

LAST PAGE

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FOR FURTHER INFORMATION.

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