

EMS CATALOG NO: 12785  
EMS PRODUCT: CRYSTAL VIOLET  
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**M A T E R I A L S A F E T Y D A T A S H E E T**

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**----- CHEMICAL IDENTIFICATION -----**

NAME: CRYSTAL VIOLET

**----- COMPOSITION/INFORMATION ON INGREDIENTS -----**

CAS #: 548-62-9

MF: C25H30CLN3

EC NO: 208-953-6

**HAZARDOUS INGREDIENTS**

CONTAINS ZINC, CHEMICAL ABSTRACTS REGISTRY NUMBER 7440-66-6.

CONTAINS 4,4'-BIS(DIMETHYLAMINO)BENZOPHENONE (MICHLER'S KETONE),  
CHEMICAL ABSTRACTS REGISTRY NUMBER 90-94-8.

CONTAINS MINERAL OIL, CHEMICAL ABSTRACTS REGISTRY NUMBER 8042-47-5.

**ADDITIONAL INFORMATION**

CONTAINS 4,4'-BIS(DIMETHYLAMINO)BENZOPHENONE (MICHLER'S KETONE),  
CHEMICAL ABSTRACTS REGISTRY NUMBER 90-94-8.

THIS COMPOUND IS LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY:  
NATIONAL TOXICOLOGY PROGRAM

**SYNONYMS**

ADERGON \* AIZEN CRYSTAL VIOLET \* AIZEN CRYSTAL VIOLET EXTRA PURE \*  
ANILINE VIOLET \* ANILINE VIOLET PYOKTANINE \* ATMONIL \* AVERMIN \*  
AXURIS \* BADIL \* BASIC VIOLET 3 \* BASIC VIOLET BN \* BISMUTH VIOLET \*  
BLAUES PYOKTANIN (GERMAN) \* BRILLIANT VIOLET 5B \* CALCOZINE VIOLET C \*

CALCOZINE VIOLET 6BN \* CI. 42555 \* CI. BASIC VIOLET 3 \* CRYSTAL VIOLET \* CRYSTAL VIOLET 6B \* CRYSTAL VIOLET O \* CRYSTAL VIOLET 5BO \* CRYSTAL VIOLET 6BO \* CRYSTAL VIOLET 10B \* CRYSTAL VIOLET AO \* CRYSTAL VIOLET AON \* CRYSTAL VIOLET BP \* CRYSTAL VIOLET BPC \* CRYSTAL VIOLET CHLORIDE \* CRYSTAL VIOLET EXTRA PURE \* CRYSTAL VIOLET EXTRA PURE APN \* CRYSTAL VIOLET EXTRA PURE APNX \* CRYSTAL VIOLET FN \* CRYSTAL VIOLET HL2 \* CRYSTAL VIOLET PURE DSC \* CRYSTAL VIOLET PURE DSC BRILLIANT \* CRYSTAL VIOLET SS \* CRYSTAL VIOLET TECHNICAL \* CRYSTAL VIOLET USP \* GENTERSAL \* GENTIAN VIOLET \* GENTIANAVIOLETT (GERMAN) \* GENTIAVERM \* GENTICID \* GENTIOLETTEN \* HECTOGRAPH VIOLET SR \* HECTO VIOLET R \* HEXAMETHYL-P-ROSANILINE CHLORIDE \* HEXAMETHYL P-ROSANILINE HYDROCHLORIDE \* HEXAMETHYL VIOLET \* HIDACO BRILLIANT CRYSTAL VIOLET \* HIDACO CRYSTAL VIOLET \* KRISTALL-VIOLETT (GERMAN) \* MEROXYL \* MEROXYLAN \* MEROXYLAN-WANDER \* MEROXYL-WANDER \* METHYLOSANILINCHLORID (GERMAN) \* METHYLOSANILINE CHLORIDE \* METHYLOSANILINUM CHLORATUM \* METHYL VIOLET 5BNO \* METHYL VIOLET 5BO \* METHYL VIOLET 10B \* METHYL VIOLET 10BD \* METHYL VIOLET 10BK \* METHYL VIOLET 10BN \* METHYL VIOLET 10BNS \* METHYL VIOLET 10BO \* METHYL VIOLETT (GERMAN) \* MITSUI CRYSTAL VIOLET \* NC-C55969 \* OXIURAN \* OXYCOLOR \* OXYOZYL \* PAPER BLUE R \* PARAROSANILINE, N,N,N',N',N' ', N'-HEXAMETHYL-, CHLORIDE \* PLASTORESIN VIOLET 5BO \* PYOKTANIN \* PYOVERM \* VERMICID \* VIANIN \* VIOCID \* 12416 VIOLET \* VIOLET 6BN \* VIOLET 5BO \* VIOLET CP \* VIOLET GENCIANOVA (CZECH) \* VIOLET KRYSTALOVA (CZECH) \* VIOLET XXIII \* VIOLET ZASADITA 3 (CZECH) \*

----- **HAZARDS IDENTIFICATION** -----

LABEL PRECAUTIONARY STATEMENTS

TOXIC

MAY CAUSE CANCER.

MAY CAUSE HERITABLE GENETIC DAMAGE.

HARMFUL IF SWALLOWED.

IRRITATING TO RESPIRATORY SYSTEM AND SKIN.

RISK OF SERIOUS DAMAGE TO EYES.

VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

AVOID EXPOSURE - OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.

DO NOT BREATHE DUST.

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

MAY DECOMPOSE ON EXPOSURE TO LIGHT.

----- **FIRST-AID MEASURES** -----

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.  
CALL A PHYSICIAN.

IF INHALED, REMOVE TO FRESH AIR. IF BREATHING BECOMES DIFFICULT,  
CALL A PHYSICIAN.

IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS  
AMOUNTS OF WATER.

IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER  
FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING  
THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

**----- FIRE FIGHTING MEASURES -----**

EXTINGUISHING MEDIA

WATER SPRAY.

CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

SPECIAL FIRE FIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO  
PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSION HAZARDS

EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

**----- ACCIDENTAL RELEASE MEASURES -----**

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY  
RUBBER GLOVES.

WEAR DISPOSABLE COVERALLS AND DISCARD THEM AFTER USE.  
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.

AVOID RAISING DUST.

VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.  
EVACUATE AREA.

**----- HANDLING AND STORAGE -----**

REFER TO SECTION 8.

**----- EXPOSURE CONTROLS/PERSONAL PROTECTION -----**

USE ONLY IN A CHEMICAL FUME HOOD.

SAFETY SHOWER AND EYE BATH.

WASH CONTAMINATED CLOTHING BEFORE REUSE.

WASH THOROUGHLY AFTER HANDLING.

DO NOT BREATHE DUST.

DO NOT GET IN EYES, ON SKIN, ON CLOTHING.

AVOID PROLONGED OR REPEATED EXPOSURE.

NIOSH/MSHA-APPROVED RESPIRATOR IN NON-VENTILATED AREAS AND/OR FOR  
EXPOSURE ABOVE THE ACGIH TLV.

COMPATIBLE CHEMICAL-RESISTANT GLOVES.

CHEMICAL SAFETY GOGGLES.

KEEP TIGHTLY CLOSED.

STORE IN A COOL DRY PLACE.

**----- PHYSICAL AND CHEMICAL PROPERTIES -----**

PHYSICAL PROPERTIES

MELTING POINT: 173 C

-----STABILITY AND REACTIVITY-----

STABILITY

STABLE.

INCOMPATIBILITIES

STRONG OXIDIZING AGENTS

STRONG REDUCING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

CARBON MONOXIDE, CARBON DIOXIDE

NITROGEN OXIDES

HAZARDOUS POLYMERIZATION

WILL NOT OCCUR.

-----TOXICOLOGICAL INFORMATION-----

ACUTE EFFECTS

CAUSES SKIN IRRITATION.

MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.

CAUSES SEVERE EYE IRRITATION.

MAY BE HARMFUL IF INHALED.

MATERIAL IS IRRITATING TO MUCCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.

HARMFUL IF SWALLOWED.

PROLONGED EXPOSURE CAN CAUSE:

NAUSEA, HEADACHE AND VOMITING

CHRONIC EFFECTS

THIS PRODUCT IS OR CONTAINS A COMPONENT THAT HAS BEEN REPORTED TO BE PROBABLY CARCINOGENIC BASED ON ITS IARC, OSHA, ACGIH, NTP OR EPA CLASSIFICATION.

MAY ALTER GENETIC MATERIAL.

RTECS #: B09000000

AMMONIUM,

(4-(BIS(P-(DIMETHYLAMINO)PHENYL)METHYLENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)

DI METHYL-, CHLORIDE

IRRITATION DATA

SKN-HMN 3 MG/3D-I MLD

85DKA8 -,127,1977

SKN-HMN 2 MG/2D-I MLD

ADVEA4 52,55,1972

SKN-GPG 6 MG/3D-I

ADVEA4 52,55,1972

TOXICITY DATA

ORL-RAT LD50:420 MG/KG

ARZNAD 1,5,1951

IPR-RAT LD50:8900 UG/KG

ARZNAD 1,5,1951

ORL-MUS LD50:96 MG/KG

ARZNAD 1,5,1951

IPR-MUS LD50:5100 UG/KG

ARZNAD 1,5,1951

ORL-RBT LD50:150 MG/KG

ARZNAD 1,5,1951

IPR-RBT LD50:5 MG/KG

ARZNAD 1,5,1951

IDU-RBT LD50: 160 MG/KG

ARZNAD 1,5,1951

TARGET ORGAN DATA

BEHAVIORAL (FOOD INTAKE)

BEHAVIORAL (ATAXIA)

LUNGS, THORAX OR RESPIRATION (ACUTE PULMONARY EDEMA)

GASTROINTESTINAL (HYPERMOTILITY, DIARRHEA)

GASTROINTESTINAL (NAUSEA OR VOMITING)

EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)

EFFECTS ON EMBRYO OR FETUS (FETOTOXICITY)

SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL SYSTEM)

SPECIFIC DEVELOPMENTAL ABNORMALITIES (UROGENITAL SYSTEM)

SPECIFIC DEVELOPMENTAL ABNORMALITIES (OTHER DEVELOPMENTAL ABNORMALITIES)

NUTRITIONAL AND GROSS METABOLIC (WEIGHT LOSS OR DECREASED WEIGHT GAIN)

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES

(RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR

COMPLETE INFORMATION.

----- **ECOLOGICAL INFORMATION** -----

DATA NOT YET AVAILABLE.

----- **DISPOSAL CONSIDERATIONS** -----

CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL.

OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

----- **TRANSPORT INFORMATION** -----

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

----- **REGULATORY INFORMATION** -----

EUROPEAN INFORMATION

TOXIC

R 45

MAY CAUSE CANCER.

R 46

MAY CAUSE HERITABLE GENETIC DAMAGE.

R 22

HARMFUL IF SWALLOWED.

R 37/38

IRRITATING TO RESPIRATORY SYSTEM AND SKIN.

R 41

RISK OF SERIOUS DAMAGE TO EYES.

R 50/53

VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

S 45

IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

S 26

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

S 36/37/39

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

S 22

DO NOT BREATHE DUST.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

NOHS 1974: HZD M1517; NIS 58; TNF 9858; NOS 52; TNE 79824

NOES 1983: HZD M1517; NIS 21; TNF 3280; NOS 34; TNE 75632; TFE 49319

EPA GENETOX PROGRAM 1988, POSITIVE: B SUBTILIS REASSAY

EPA GENETOX PROGRAM 1988, NEGATIVE: S CEREVISIAE-HOMOZYGOSIS

EPA GENETOX PROGRAM 1988, INCONCLUSIVE: B SUBTILIS REASSAY; HISTIDINE REVERSION-AMES TEST

EPA GENETOX PROGRAM 1988, INCONCLUSIVE: D MELANOGASTER SEX-LINKED LETHAL

EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

EPA TSCA TEST SUBMISSION (TSCATS) DATABASE, JANUARY 2001

U.S. INFORMATION

THIS PRODUCT IS OR CONTAINS A COMPONENT THAT IS SUBJECT TO SARA313 REPORTING REQUIREMENTS.

THIS PRODUCT IS OR CONTAINS CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

----- **OTHER INFORMATION** -----

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