# Chem-Impex International Inc.

Tel: (630) 766-2112 Fax: (630) 766-2218

E-mail: <u>sales@chemimpex.com</u> Web site: <u>www.chemimpex.com</u>

**Shipping and Correspondence:** Manufacturing site: 935 Dillon Drive 825 Dillon Drive

Wood Dale, IL 60191 USA Wood Dale, IL 60191 USA

# SAFETY DATA SHEET

# SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 36105

NAME: 2,2-Azobis(2-methylpropionitrile)

SYNONYMS:  $\alpha, \alpha$ -Azoisobutyronitrile

24 HOUR EMERGENCY

(800) 535-5053(USA)

TELEPHONE:

352-323-3500 (INTERNATIONAL)

TO REQUEST AN MSDS: (800) 869-9290

CUSTOMER SERVICE: (630) 766-2112

#### SECTION 2. HAZARDS IDENTIFICATION

#### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

#### GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)

SELF-REACTIVE CHEMICALS (TYPE C), H242 ACUTE TOXICITY, ORAL (CATEGORY 4), H302 ACUTE TOXICITY, INHALATION (CATEGORY 4), H332 SHORT-TERM (ACUTE) AQUATIC HAZARD (CATEGORY 3), H402 LONG-TERM (CHRONIC) AQUATIC HAZARD (CATEGORY 3), H412

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

# GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

**PICTOGRAM** 



SIGNAL WORD

# **HAZARD STATEMENT(S)**

H242 HEATING MAY CAUSE A FIRE.

H302 + H332HARMFUL IF SWALLOWED OR IF INHALED.

H412 HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

#### PRECAUTIONARY STATEMENT(S)

P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES. -

NO SMOKING.

P220 KEEP/STORE AWAY FROM CLOTHING/ COMBUSTIBLE MATERIALS.

P234 KEEP ONLY IN ORIGINAL CONTAINER.

P261 AVOID BREATHING DUST/FUME/GAS/MIST/VAPOURS/SPRAY.

WASH THOROUGHLY AFTER HANDLING. P264

DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT. P270 USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA. P271

P273 AVOID RELEASE TO THE ENVIRONMENT.

P280 WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE

PROTECTION.

P301 + P312 + P330 IF SWALLOWED: CALL A POISON CENTER/DOCTOR IF YOU FEEL

UNWELL. RINSE MOUTH.

P304 + P340 + P312IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP

COMFORTABLE FOR BREATHING. CALL A POISON CENTER/DOCTOR

IF YOU FEEL UNWELL.

P370 + P378IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR ALCOHOL-

RESISTANT FOAM TO EXTINGUISH.

P403 + P235STORE IN A WELL-VENTILATED PLACE, KEEP COOL

P420 STORE AWAY FROM OTHER MATERIALS.

P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE

RISK OF EXPLOSION IF HEATED UNDER CONFINEMENT.

DISPOSAL PLANT.

HAZARDS NOT

**OTHERWISE CLASSIFIED** 

(HNOC) OR NOT

**COVERED BY GHS** 

#### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:  $C_8H_{12}N_4$ 

MW: 164.21

CAS-NO. 78-67-1

≥ 98% (Assay) **PURITY**:

#### HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION				
2,2-Azobis(2-methylpropionitrile)						
	SELF-REACT. C; ACUTE TOX. 4; AQUATIC ACUTE 3; AQUATIC CHRONIC 3; H242, H302, H332, H402, H412	<= 100 %				

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

#### **SECTION 4. FIRST-AID MEASURES**

**CONTACT** 

#### **DESCRIPTION OF FIRST AID MEASURES**

GENERAL ADVICE SHOW THIS MATERIAL SAFETY DATA SHEET TO THE

DOCTOR IN ATTENDANCE.

**IF INHALED** AFTER INHALATION: FRESH AIR. IF BREATHING STOPS:

MOUTH-TO-MOUTH BREATHING OR ARTIFICIAL RESPIRATION. OXYGEN IF NECESSARY, IMMEDIATELY

CALL IN PHYSICIAN.

IN CASE OF SKIN IN CASE OF SKIN CONTACT: TAKE OFF IMMEDIATELY ALL

CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/

SHOWER.

IN CASE OF EYE AFTER EYE CONTACT: RINSE OUT WITH PLENTY OF

**CONTACT** WATER. REMOVE CONTACT LENSES.

IF SWALLOWED AFTER SWALLOWING: IMMEDIATELY MAKE VICTIM DRINK

WATER (TWO GLASSES AT MOST). CONSULT A PHYSICIAN.

MOST IMPORTANT THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS

**SYMPTOMS AND** ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2)

EFFECTS, BOTH ACUTE AND/OR IN SECTION 11

AND DELAYED

INDICATION OF ANY NO DATA AVAILABLE

IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

#### SECTION 5. FIRE AND EXPLOSION DATA

SUITABLE SUITABLE EXTINGUISHING MEDIA

EXTINGUISHING MEDIA WATER FOAM CARBON DIOXIDE (CO2) DRY POWDER

UNSUITABLE EXTINGUISHING MEDIA

FOR THIS SUBSTANCE/MIXTURE NO LIMITATIONS OF

EXTINGUISHING AGENTS ARE GIVEN.

SPECIAL HAZARDS CARBON OXIDES

ARISING FROM THE NITROGEN OXIDES (NOX)

SUBSTANCE OR MIXTURE COMBUSTIBLE.

RISK OF DUST EXPLOSION.

EXPLOSIVE DECOMPOSITION POSSIBLE ON HEATING.

AVOID SHOCK AND FRICTION. FIRE MAY CAUSE EVOLUTION OF:

NITROGEN OXIDES, HYDROGEN CYANIDE (HYDROCYANIC

ACID)

DEVELOPMENT OF HAZARDOUS COMBUSTION GASES OR

VAPOURS POSSIBLE IN THE EVENT OF FIRE.

ADVICE FOR IN THE EVENT OF FIRE, WEAR SELF-CONTAINED

FIREFIGHTERS BREATHING APPARATUS.

FURTHER INFORMATION REMOVE CONTAINER FROM DANGER ZONE AND COOL

WITH WATER. SUPPRESS (KNOCK DOWN)

GASES/VAPORS/MISTS WITH A WATER SPRAY JET. PREVENT FIRE EXTINGUISHING WATER FROM CONTAMINATING SURFACE WATER OR THE GROUND

WATER SYSTEM.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

**PRECAUTIONS** 

PERSONAL ADVICE FOR NON-EMERGENCY PERSONNEL: AVOID PRECAUTIONS, INHALATION OF DUSTS. AVOID SUBSTANCE CONTACT.
PROTECTIVE EQUIPMENT ENSURE ADEQUATE VENTILATION. EVACUATE THE DANGER AREA, OBSERVE EMERGENCY PROCEDURES,

**PROCEDURES** CONSULT AN EXPERT.

FOR PERSONAL PROTECTION SEE SECTION 8.

**ENVIRONMENTAL** DO NOT LET PRODUCT ENTER DRAINS.

METHODS AND COVER DRAINS. COLLECT, BIND, AND PUMP OFF SPILLS.

MATERIALS FOR
OBSERVE POSSIBLE MATERIAL RESTRICTIONS (SEE
SECTIONS 7 AND 10). TAKE UP DRY. DISPOSE OF PROPERLY.

CLEAN UP AFFECTED AREA. AVOID GENERATION OF

DUSTS.

#### SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE WO

HANDLING

WORK UNDER HOOD. DO NOT INHALE

SUBSTANCE/MIXTURE.

KEEP AWAY FROM OPEN FLAMES, HOT SURFACES AND

SOURCES OF IGNITION.

CHANGE CONTAMINATED CLOTHING. PREVENTIVE SKIN PROTECTION RECOMMENDED. WASH HANDS AFTER

WORKING WITH SUBSTANCE.

FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES DRY. PROTECTED FROM LIGHT.TIGHTLY CLOSED AND

AWAY FROM SOURCES OF IGNITION AND HEAT.

OBSERVE NATIONAL REGULATIONS.

Store at  $\leq$  -20 °C

**SPECIFIC END USE(S)** 

APART FROM THE USES MENTIONED IN SECTION 1.2 NO

OTHER SPECIFIC USES ARE STIPULATED.

# SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### CONTROL PARAMETERS

#### COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

COMPONENT	CAS-NO.	VALUE	CONTROL	BASIS
			PARAMETERS	
2,2-Azobis(2-	78-67-1	TWA	5 MG/M3	USA. OCCUPATIONAL
methylpropionitrile)				EXPOSURE LIMITS (OSHA) -
				TABLE Z-1 LIMITS FOR AIR
				CONTAMINANTS
	REMARKS	SKIN DESIGNATION		
		С	4.7 PPM	USA. NIOSH RECOMMENDED
			5 MG/M3	EXPOSURE LIMITS

#### **EXPOSURE CONTROLS**

APPROPRIATE ENGINEERING CONTROLS

CHANGE CONTAMINATED CLOTHING. PREVENTIVE SKIN PROTECTION RECOMMENDED. WASH HANDS AFTER

WORKING WITH SUBSTANCE.

# PERSONAL PROTECTIVE EQUIPMENT

**EYE/FACE PROTECTION** USE EQUIPMENT FOR EYE PROTECTION TESTED AND

APPROVED UNDER APPROPRIATE GOVERNMENT

STANDARDS SUCH AS NIOSH (US) OR EN 166(EU). SAFETY

**GLASSES** 

**SKIN PROTECTION** THIS RECOMMENDATION APPLIES ONLY TO THE PRODUCT

STATED IN THE SAFETY DATA SHEET, SUPPLIED BY US AND

FOR THE DESIGNATED USE. WHEN DISSOLVING IN OR

MIXING WITH OTHER SUBSTANCES AND UNDER CONDITIONS DEVIATING FROM THOSE STATED IN EN

16523-1

FULL CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED:KCL 741 DERMATRIL L

THIS RECOMMENDATION APPLIES ONLY TO THE PRODUCT STATED IN THE SAFETY DATA SHEET, SUPPLIED BY US AND

FOR THE DESIGNATED USE. WHEN DISSOLVING IN OR

MIXING WITH OTHER SUBSTANCES AND UNDER

CONDITIONS DEVIATING FROM THOSE STATED IN EN

16523-1.

SPLASH CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED: KCL 741 DERMATRIL L

**BODY PROTECTION** COMPLETE SUIT PROTECTING AGAINST CHEMICALS, THE

TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF

THE DANGEROUS SUBSTANCE AT THE SPECIFIC

WORKPLACE.

**RESPIRATORY PROTECTION** RECOMMENDED FILTER TYPE: FILTER TYPE P2

THE ENTREPENEUR HAS TO ENSURE THAT MAINTENANCE.

CLEANING AND TESTING OF RESPIRATORY PROTECTIVE

DEVICES ARE CARRIED OUT ACCORDING TO THE

INSTRUCTIONS OF THE PRODUCER.

THESE MEASURES HAVE TO BE PROPERLY DOCUMENTED.

REQUIRED WHEN DUSTS ARE GENERATED.

OUR RECOMMENDATIONS ON FILTERING RESPIRATORY

PROTECTION ARE BASED ON THE FOLLOWING

STANDARDS: DIN EN 143, DIN 14387 AND OTHER

ACCOMPANYING STANDARDS RELATING TO THE USED

RESPIRATORY PROTECTION SYSTEM.

#### DO NOT LET PRODUCT ENTER DRAINS.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

# INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE White powder or crystalline powder

ODOUR NO DATA AVAILABLE
ODOUR THRESHOLD NO DATA AVAILABLE
PH NO DATA AVAILABLE
MELTING 102 - 104 °C (dec.)

POINT/FREEZING POINT

BOILING POINT FLASH POINT

EVAPOURATION RATE NO DATA AVAILABLE FLAMMABILITY (SOLID, NO DATA AVAILABLE

GAS)

UPPER/LOWER NO DATA AVAILABLE

FLAMMABILITY OR EXPLOSIVE LIMITS

VAPOUR PRESSURE 0.01 HPA AT 25 C VAPOUR DENSITY NO DATA AVAILABLE

RELATIVE DENSITY

WATER SOLUBILITY 350 G/L AT 25 C

PARTITION COEFFICIENT: LOG POW: 1.1 AT 25 C

N- OCTANOL/WATER

AUTO-IGNITION NO DATA AVAILABLE

TEMPERATURE

DECOMPOSITION 184.01 KJ/KG TYPE C,

TEMPERATURE 95.73 KJ/KG

VISCOSITY NO DATA AVAILABLE

EXPLOSIVE PROPERTIES RISK OF EXPLOSION IF HEATED UNDER CONFINEMENT.

OXIDIZING PROPERTIES NO DATA AVAILABLE

#### OTHER SAFETY INFORMATION

NO DATA AVAILABLE

# **SECTION 10. STABILITY AND REACTIVITY**

REACTIVITY RISK OF DUST EXPLOSION. MECHANICAL SENSITIVITY

(FRICTION)

RISK OF EXPLOSION IF HEATED UNDER CONFINEMENT. THE FOLLOWING APPLIES IN GENERAL TO FLAMMABLE

ORGANIC SUBSTANCES AND MIXTURES: IN

CORRESPONDINGLY FINE DISTRIBUTION, WHEN WHIRLED UP A DUST EXPLOSION POTENTIAL MAY GENERALLY BE

ASSUMED.

**CHEMICAL STABILITY HEAT-SENSITIVE** 

SENSITIVITY TO LIGHT

THE PRODUCT IS CHEMICALLY STABLE UNDER STANDARD

AMBIENT CONDITIONS (ROOM TEMPERATURE).

**POSSIBILITY OF** 

A RISK OF EXPLOSION AND/OR OF TOXIC GAS FORMATION

**HAZARDOUS REACTIONS** EXISTS WITH THE FOLLOWING SUBSTANCES:

ALDEHYDES ALKALINES ALCOHOLS ALKALI METALS

ACIDS

N-HEPTANE WITH HEAT.

KETONES

**CONDITIONS TO AVOID** AVOID SHOCK AND FRICTION.

HEATING (EXPLOSIVE DECOMPOSITION).

**INCOMPATIBLE MATERIALS** 

NO DATA AVAILABLE

**HAZARDOUS DECOMPOSITION** 

**PRODUCTS** 

IN THE EVENT OF FIRE: SEE SECTION 5

#### **SECTION 11.** TOXICOLOGICAL INFORMATION

# INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY NO DATA AVAILABLE

LC50 INHALATION - RAT - 1 H - > 7.780 MG/L - DUST/MIST

DERMAL: NO DATA AVAILABLE

NO DATA AVAILABLE

SKIN NO DATA AVAILABLE

**CORROSION/IRRITATION** 

SERIOUS EYE NO DATA AVAILABLE

DAMAGE/EYE IRRITATION

RESPIRATORY OR SKIN

**SENSITISATION** 

NO DATA AVAILABLE

GERM CELL MUTAGENICITY NO DATA AVAILABLE

**CARCINOGENICITY** 

IARC: NO INGREDIENT OF THIS PRODUCT PRESENT AT LEVELS

GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS

PROBABLE, POSSIBLE OR CONFIRMED HUMAN

CARCINOGEN BY IARC.

NTP: NO INGREDIENT OF THIS PRODUCT PRESENT AT LEVELS

GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A

KNOWN OR ANTICIPATED CARCINOGEN BY NTP.

OSHA: NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS

GREATER THAN OR EQUAL TO 0.1% IS ON OSHA S LIST OF

REGULATED CARCINOGENS.

REPRODUCTIVE TOXICITY NO DATA AVAILABLE

SPECIFIC TARGET ORGAN

**TOXICITY - SINGLE** 

**EXPOSURE** 

NO DATA AVAILABLE

SPECIFIC TARGET ORGAN
TOYLCITY DEPEATED

TOXICITY - REPEATED

EXPOSURE

NO DATA AVAILABLE

**ASPIRATION HAZARD** NO DATA AVAILABLE

ADDITIONAL INFORMATION

RTECS: UG0800000

NAUSEA, DIZZINESS, HEADACHE, DROWSINESS,

UNCONSCIOUSNESS

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL,

PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

 ${\tt STOMACH-IRREGULARITIES-BASED\ ON\ HUMAN}$ 

**EVIDENCE** 

#### SECTION 12. ECOLOGICAL INFORMATION

**TOXICITY** NO DATA AVAILABLE

PERSISTENCE AND DEGRADABILITY

NO DATA AVAILABLE

BIOACCUMULATIVE

POTENTIAL

NO DATA AVAILABLE

MOBILITY IN SOIL NO DATA AVAILABLE

RESULTS OF PBT AND VPVB

ASSESSMENT

PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED

OTHER ADVERSE EFFECTS AN ENVIRONMENTAL HAZARD CANNOT BE EXCLUDED

IN THE EVENT OF UNPROFESSIONAL HANDLING OR

DISPOSAL.

HARMFUL TO AQUATIC LIFE WITH LONG LASTING

EFFECTS.

# SECTION 13. DISPOSAL CONSIDERATIONS

#### WASTE TREATMENT METHODS

**PRODUCT** WASTE MATERIAL MUST BE DISPOSED OF IN

ACCORDANCE WITH THE NATIONAL AND LOCAL REGULATIONS. LEAVE CHEMICALS IN ORIGINAL

CONTAINERS. NO MIXING WITH OTHER WASTE. HANDLE UNCLEANED CONTAINERS LIKE THE PRODUCT ITSELF.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

#### SECTION 14. TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: SELF-REACTIVE SOLID TYPE C (2, 2 -AZOBIS(2-

METHYLPROPIONITRILE)

UN NUMBER: 3234 CLASS: 4.1

REPORTABLE QUANTITY

(RQ):

POISON INHALATION NO

HAZARD:

**IMDG** 

PROPER SHIPPING NAME: SELF-REACTIVE SOLID TYPE C, TEMPERATURE

CONTROLLED (2,2"- AZODI(ISOBUTYRONITRILE))

UN NUMBER: 3234 CLASS: 4.1 EMS-NO: F-F, S-K

**IATA** 

PROPER SHIPPING NAME: SELF-REACTIVE SOLID TYPE C, TEMPERATURE

CONTROLLED (2,2"-AZODI (ISOBUTYRONITRILE))

UN NUMBER: 3234 CLASS: 4.1

IATA PASSENGER: NOT PERMITTED FOR TRANSPORT IATA CARGO: NOT PERMITTED FOR TRANSPORT

#### **SECTION 15. REGULATORY INFORMATION**

SARA 302 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS

WITH A SECTION 302 EHS TPQ.

SARA 313 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL

COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DE MINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

CAS NO. REVISION DATE

2,2-Azobis(2- 78-67-1

methylpropionitrile)

# SECTION 16. OTHER INFORMATION

#### FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

H242 HEATING MAY CAUSE A FIRE.

H302 + H332 HARMFUL IF SWALLOWED OR IF INHALED.

H412 HARMFUL TO AQUATIC LIFE WITH LONG LASTING

EFFECTS.

MSDS LEGEND

MW: MOLECULAR WEIGHT MF: MOLECULAR FORMULA

VOC: VOLATILE ORGANIC COMPOUNDS

ACGIH: AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL

**HYGINISTS** 

CAS: CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA) TLV: THRESHOLD LIMIT VALUE (ACGIH)

#### IMPORTANT:

THE INFORMATION ABOVE IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, WE MAKE NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES. IN NO EVENT SHALL CII BE LIABLE FOR ANY CLAIMS, LOSSES, OR DAMAGES OF ANY THIRD PARTY OR FOR LOST PROFITS OR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES, HOWSOEVER ARISING, EVEN IF CII HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

VERSION: 3.2 REVISION DATE: 11/28/2023