SDS: 0001145
Date Prepared: 07-Dec-2023
Date of last significant revision: 28-Nov-2023

SAFETY DATA SHEET

Safety Data Sheet according to regulation (EC) No 1907/2006 & 1272/2008 and amendments

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 PRODUCT IDENTIFIER

CYCAT® 296-9 CATALYST

Product Description: Solution of a phosphoric acid derivative in isobutanol

Unique Formula Identifier (UFI) WNV0-30TT-U00P-UUUE

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Intended/Recommended Use: Catalyst
Uses advised against: -

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: Tennants Distribution Limited, Hazelbottom Road, Cheetham, Manchester. M8 0GR
For Product and all Non-Emergency Information call +44(0)161 205 4454

1.4 EMERGENCY TELEPHONE NUMBER

EMERGENCY TELEPHONE NUMBER (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call: +44(0)844 335 0001

SECTION 2: HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification according to Regulation (EC) No 1272/2008 and amendments
Flammable Liquid Hazard Category 3
Germ Cell Mutagenicity Hazard Category 1B
Specific Target Organ Toxicity (STOT) - Single Exposure Hazard Category 3
Skin Corrosion / Irritation Hazard Category 1B

Serious Eye Damage / Eye Irritation Hazard Category 1

2.2 LABEL ELEMENTS

Signal Word
Danger

Hazard Statements
H226 - Flammable liquid and vapour.
H340 - May cause genetic defects.
H336 - May cause drowsiness or dizziness.
H335 - May cause respiratory irritation.
H314 - Causes severe skin burns and eye damage.

Precautionary Statements
Precautionary statements on the label will be reduced as indicated in Regulation (EC) No 1272/2008, Article 28.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P201 - Obtain special instructions before use.
P271 - Use only outdoors or in a well-ventilated area.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370 + P378 - In case of fire: Use CO2, dry chemical, or foam to extinguish.
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P363 - Wash contaminated clothing before reuse.
P403 + P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

2.3 OTHER HAZARDS
Not applicable

RESULTS OF PBT AND vPvB ASSESSMENT
Not determined

ENDOCRINE DISRUPTOR INFORMATION

Endocrine disrupting - health:
Not applicable

Endocrine disrupting - environment:
Not applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance, Mixture or Article? Mixture

3.2 MIXTURES

Component / CAS No.	%	EC-No	REACH Registration Number	Classification according to Regulation (EC) No. 1272/2008 [CLP]	EU - CLP EUH Codes
Isobutanol 78-83-1	49	201-148-0	01-2119484609-23	Flam. Liq. 3 (H226) STOT SE 3 (H335) STOT SE 3 (H336) Skin Irrit. 2 (H315) Eye Dam. 1 (H318)	
Dimethyl acid pyrophosphate 26644-00-8	~ 27.5	247-871-5	Not available	Skin Corr. 1B (H314)	
Phosphoric acid 7664-38-2	~ 1.25	231-633-2	01-2119485924-24	Met. Corr. 1 (H290) B Skin Corr. 1B (H314) B Eye Dam. 1 (H318) B	
Trimethyl phosphate 512-56-1	~ 0.25	208-144-8	Not available	Carc. 2 (H351) Muta. 1B (H340) Acute tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	

Component / CAS No.	REACH SVHC	M-Factor	CLP Specific Concentration Limits	CLP Acute Toxicity Estimates (ATEs)
Phosphoric acid 7664-38-2			Eye Irrit. 2 H319 10%<=C<25% Skin Corr. 1B H314 C>=25% Skin Irrit. 2 H315 10%<=C<25%	

See Section 16 for full text of H phrases.

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

Eye Contact:
Rinse immediately with plenty of water for at least 15 minutes. Obtain medical attention immediately.

Skin Contact:
Take off immediately all contaminated clothing. Wear impermeable gloves. Wash immediately with plenty of water and soap. Pay particular attention to skin crevices, nail folds, etc. Do not reuse contaminated clothing without laundering. Do not reuse contaminated leatherware.

Ingestion:
If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Not applicable.

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable Extinguishing Media:
Use water spray, alcohol-resistant foam, carbon dioxide or dry chemical to extinguish fires. Water stream may be ineffective.

Unsuitable Extinguishing Media:
full water jet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Keep containers cool by spraying with water if exposed to fire.

5.3 ADVICE FOR FIREFIGHTERS

Protective Equipment:
Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See SDS Section 8 (Exposure Controls/Personal Protection).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Where exposure level is known, wear approved respirator suitable for level of exposure. Where exposure level is not known, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

6.2 ENVIRONMENTAL PRECAUTIONS

None known.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Remove sources of ignition. Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

6.4 REFERENCE TO OTHER SECTIONS

See Sections 7, 8 and 13 for additional information.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Precautions: Keep away from heat, sparks and open flame. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting and other equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash hands thoroughly after handling. Wear protective gloves/clothing and eye/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Do not breathe vapors or spray mist.

Special Handling Statements: Containers must be bonded and grounded when pouring or transferring material.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Areas containing this material should have fire safe practices and electrical equipment in accordance with applicable regulations and/or guidelines. Standards are primarily based on the material`s flashpoint, but may also take into account properties such as miscibility with water or toxicity. All local and national regulations should be followed.

Storage Temperature: Ambient temperature
Reason: Safety.

Storage Class (TRGS 510): 3

7.3 SPECIFIC END USE(S)
Refer to Section 1 or Exposure Scenario if applicable.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

78-83-1 Isobutanol

United Kingdom: WEL (Workplace Exposure Limits)	50 ppm (TWA) 154 mg/m^3 (TWA) 75 ppm (STEL) 231 mg/m^3 (STEL)
Europe ILV (Indicative Limit Values):	Not established
Other Value:	Not established

7664-38-2 Phosphoric acid

United Kingdom: WEL (Workplace Exposure Limits)	1 mg/m^3 (TWA) 2 mg/m^3 (STEL)
Europe ILV (Indicative Limit Values):	1 mg/m^3 (TWA) 2 mg/m^3 (STEL)
Other Value:	Not established

Biological Exposure Limit(s)

No values have been established.

Derived No Effect Level (DNEL):
Isobutanol (78-83-1)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	310	mg/m^3	Long term, local
Consumer	inhalation	55	mg/m^3	Long term, local

Phosphoric acid (7664-38-2)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	10.7	mg/m^3	Long term, local
Worker	inhalation	1	mg/m^3	Long term, local
Worker	inhalation	2	mg/m^3	Short term, local
General Population	inhalation	4.57	mg/m^3	Long term, systemic

General Population	inhalation	0.36	mg/m^3	Long term, local
General Population	Oral	0.1	mg/kg/day	Long term, systemic

Trimethyl phosphate (512-56-1)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	0.141	mg/m^3	Long term, systemic
Worker	Dermal	0.2	mg/kg/day	Long term, systemic
General Population	Oral	25	µg/kg//day	Long term, systemic

Predicted No Effect Concentration (PNEC):

Isobutanol (78-83-1)

Compartment	PNEC	Units
Fresh water	0.4	mg/l
Marine water	0.04	mg/l
Intermittent water release	11	mg/l
Sediment (fresh water)	1.56	mg/kg
Sediment (marine water)	0.156	mg/kg
Soil	0.076	mg/kg
Sewage treatment plant	10	mg/l

Trimethyl phosphate (512-56-1)

Compartment	PNEC	Units
Fresh water	3.2	mg/l
Marine water	0.32	mg/l
Sewage treatment plant	100	mg/l
Sediment (fresh water)	11 523	mg/kg
Sediment (marine water)	11 523	mg/kg
Soil	427.2	mg/kg

8.2 EXPOSURE CONTROLS

Engineering Measures:
Utilize a closed system process where feasible.
Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

Respiratory Protection:
For operations where inhalation exposure can occur use an approved respirator. Recommendations are listed below. Other protective respiratory equipment may be used based on user's own risk assessment.

Recommended:
Full Face Mask with organic vapor cartridge, Type A filter (BP >65°C)

Eye protection:
Prevent eye and skin contact.
Provide eye wash fountain and safety shower in close proximity to points of potential exposure.
Wear eye/face protection such as chemical splash proof goggles or face shield.

Skin Protection:
Prevent contamination of skin or clothing when removing protective equipment.
Wear impermeable gloves and suitable protective clothing.

Hand protection:
Wear protective gloves. Recommendations are listed below. Other protective materials may be used based on user's own risk assessment. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred. Replace gloves immediately when torn or any change in appearance (dimension, color, flexibility etc.) is noticed.

The selected protective gloves have to satisfy the specifications of EU Regulation (EC) 2016/425 and standard EN

ISO 374-1:2016.

Gloves for repeated or prolonged exposure - non exhaustive list:
Polyethylene Nylon (PE), thickness: > 0.062 mm, break through time: > 480 min

Gloves for short term exposure/splash protection - non exhaustive list:
Nitrile rubber (NBR), thickness: 0.38 mm, break through time: up to 30 min

The chemical resistance depends on the type of product and amount of product on the glove. Therefore gloves need to be changed when in contact with chemicals.

Not suitable gloves - non exhaustive list:
Natural rubber (NRL), thickness: 0.12 mm

Due to many conditions (e.g. temperature, abrasion) the practical usage of a chemical protective glove in practice may be much shorter than the permeation time determined through testing. Use PE gloves as under gloves for difficult situations like for instance: high exposure, unknown composition or unknown properties of the chemicals.

Additional Advice:
Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.

Formulation & (re)packing of substances and mixtures Control of worker exposure	
Process Category	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure (e.g. sampling) PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC15 - Use as laboratory reagent
Risk Management Measures and Operational Conditions	Covers percentage substance in the product up to 100 % (unless stated differently). Covers daily exposures up to 8 hours (unless stated differently). Use suitable eye protection and gloves.

Process Category	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Risk Management Measures and Operational Conditions	Covers percentage substance in the product up to 100 % (unless stated differently). Covers daily exposures up to 8 hours (unless stated differently). Provide extract ventilation to points where emissions occur. Effectiveness: 90%. Use suitable eye protection and gloves.

Process Category	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Risk Management Measures and Operational Conditions	Covers percentage substance in the product up to 100 % (unless stated differently). Covers daily exposures up to 8 hours (unless stated differently). Provide extract ventilation to points where emissions occur. Effectiveness: 97%. Use suitable eye protection and gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance: liquid
Colour: colourless

Odor:	butanol
Odor Threshold:	See Section 8 for exposure limits.
Melting Point:	Not applicable
Boiling Point:	108 °C (value for isobutanol)
Flammability:	Not available
Flammable Limits (% By Vol):	Lower: 1.7 Upper: 98 (values for isobutanol)
Flash point:	36 °C closed cup
Autoignition temperature:	427 °C (value for isobutanol)
Decomposition Temperature:	Not available
pH:	Not applicable
Viscosity (Kinematic):	Not applicable
Viscosity (Dynamic):	Not available
Solubility In Water:	Appreciable
Solubility In Solvent:	Not available
Partition coefficient n-octanol/water (log value):	Not available
Vapor Pressure:	10 mm Hg @ 22 °C (value for isobutanol)
Specific Gravity/Density:	1.05 g/cm³
Vapour density:	2.55 (air = 1) (value for isobutyl alcohol)
Particle characteristics:	Not applicable

9.2 OTHER INFORMATION

9.2.1 Information with regard to physical hazard classes
Not applicable

9.2.2 Other safety characteristics
Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY	No information available
10.2 CHEMICAL STABILITY	Stable

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Polymerization:	Will not occur
Conditions To Avoid:	None known.
10.4 CONDITIONS TO AVOID	None known.
10.5 INCOMPATIBLE MATERIALS	Strong oxidizing agents and alkalis
10.6 HAZARDOUS DECOMPOSITION PRODUCTS	Carbon dioxide Carbon monoxide (CO) oxides of phosphorus

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON HAZARD CLASSES AS DEFINED IN Regulation (EC) No 1272/2008

Likely Routes of Exposure: Oral, Skin, Eyes, Respiratory System.

Acute toxicity - oral: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.
Acute toxicity - dermal: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.
Acute toxicity - inhalation: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.

Skin corrosion / irritation: Causes severe skin burns and eye damage.
Serious eye damage / eye irritation: Causes serious eye damage

Respiratory sensitization: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.
Skin sensitization: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.

Carcinogenicity: Not Classified. **-** Based on available data and/or professional judgment, the classification criteria are not met.
Germ cell mutagenicity: May cause genetic defects.
Reproductive toxicity: Not Classified. **-** Based on available data and/or professional judgment, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure: May cause drowsiness or dizziness. May cause respiratory irritation.
Specific target organ toxicity (STOT) - repeated exposure: Not Classified. **-** Based on available data and/or professional judgment, the classification criteria are not met.

Aspiration hazard: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.

PRODUCT TOXICITY INFORMATION

ACUTE TOXICITY DATA

oral	rat	Acute LD50	> 2000 mg/kg
dermal	rabbit	Acute LD50	> 2000 mg/kg
inhalation	rat	Acute LC50 4 hr	> 5 mg/l (Dust/Mist) estimated

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	Corrosive
Acute Irritation	eye	Causes serious damage

ALLERGIC SENSITIZATION

Sensitization	dermal	No data
Sensitization	inhalation	No data

GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay	No data

OTHER INFORMATION
The product toxicity information above has been estimated.

HAZARDOUS INGREDIENT TOXICITY DATA

Isobutanol has acute oral (rat) and dermal (rabbit) LD50 values of 2.46 g/kg and 2.46 - 3.4 g/kg, respectively. The LC50 (rat) following a 4-hour inhalation exposure is >8000 ppm (24.24 mg/L). Acute overexposure to isobutanol vapor can cause irritation to the eyes (severe), skin (moderate), and mucous membranes, as well as, central nervous system depression. Literature reports that acute oral exposure to isobutanol has produced CNS effects in animals. Direct contact with isobutanol may cause severe eye and mild to moderate skin irritation.

A 50% solid solution of dimethyl acid pyrophosphate in butanol is corrosive to the skin and eyes of rabbits. The oral (rat) and dermal (rabbit) LD50 values of this 50% solid solution were 5200 mg/kg and 4300 mg/kg, respectively.

Phosphoric acid has reported acute oral (rat) and acute dermal (rat) LD50 values of 3500 mg/kg and 2740 mg/kg, respectively. Phosphoric acid has an acute 1-hour inhalation LC50 (rat) of greater than 25.5 mg/m^3. Phosphoric acid causes skin irritation and burns. Phosphoric acid has been reported to cause conjunctivitis and eye burns. Inhalation of acid mist can cause irritation of the lungs, upper respiratory tract, eyes and skin. Phosphoric acid has been reported to cause dermatitis. No genotoxic effects were seen in in vitro studies. No reproductive adverse effects were noted at the highest dose in animal studies. Prenatal toxicity studies on structural analogues have not shown any alerts. Carcinogenicity has not been investigated.

11.2 INFORMATION ON OTHER HAZARDS

Endocrine disrupting properties:
for more information see sections 2-Other hazards and 11-Hazardous ingredient toxicity data in this Safety Data Sheet.

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

The ecological assessment for this material is based on an evaluation of its components.
This material is not classified as dangerous for the environment.

12.1 TOXICITY
Not available

12.2 PERSISTENCE AND DEGRADABILITY
Not available

12.3 BIOACCUMULATIVE POTENTIAL
Not available

12.4 MOBILITY IN SOIL
Not available

12.5 RESULTS OF PBT AND vPvB ASSESSMENT
Not determined

12.6 ENDOCRINE DISRUPTING PROPERTIES

No Hazardous Ingredients

12.7 OTHER ADVERSE EFFECTS
Not available

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Fish
Isobutanol (78-83-1)	LC50 1120 - 1520 mg/L - Oncorhynchus mykiss (96h) LC50 1370 - 1670 mg/L - Pimephales promelas (96h) LC50 1480 - 1730 mg/L - Lepomis macrochirus (96h)
Dimethyl acid pyrophosphate (26644-00-8)	Not available
Phosphoric acid (7664-38-2)	Not available
Trimethyl phosphate (512-56-1)	LC50 6480 - 7580 mg/L - Pimephales promelas (96h)

Component / CAS No.	Toxicity to Water Flea
Isobutanol (78-83-1)	EC50 = 1300 mg/L - Daphnia magna (48h)
Dimethyl acid pyrophosphate (26644-00-8)	Not available
Phosphoric acid (7664-38-2)	Not available
Trimethyl phosphate (512-56-1)	Not available

Component / CAS No.	Toxicity to Algae
Isobutanol (78-83-1)	Not available
Dimethyl acid pyrophosphate (26644-00-8)	Not available
Phosphoric acid (7664-38-2)	Not available
Trimethyl phosphate (512-56-1)	Not available

Component / CAS No.	Partition coefficient
Isobutanol (78-83-1)	1
Dimethyl acid pyrophosphate (26644-00-8)	Not available
Phosphoric acid (7664-38-2)	-0.9
Trimethyl phosphate (512-56-1)	Not available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

The company encourages the recycle and reuse of products and packaging, where possible and permitted.

Product disposal

When recycle or reuse is not possible, the comany recommends that our products, especially when classified as hazardous, be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed. For disposal within the European Community, waste codes according to Directive 2008/98/EC should be assigned by the user based on the application for which the product was used.

Packaging disposal

Handle contaminated packages in the same way as the product itself. Disposal of emptied and cleaned packaging must be made in accordance with applicable local and national regulations.

Disposal-relevant information

Do not release directly or indirectly to surface water, ground water, soil or public sewage system.

SECTION 14: TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

SUBSECTION 14.1 TO 14.5

ADR/RID/ADN

Dangerous Goods?	X
UN Number:	UN2920
UN PROPER SHIPPING NAME:	CORROSIVE LIQUID, FLAMMABLE, N.O.S.
TECHNICAL NAME (N.O.S.):	ISOBUTANOL, DIMETHYL ACID PYROPHOSPHATE
Transport Hazard Class:	8
Subsidiary Class:	3
Transport Label Required:	Corrosive Flammable liquid
Packing Group:	II
Tunnel restriction code:	D/E
Comments:	Not intended for shipment by inland waterways in tank vessels.

IMO

Dangerous Goods?	X
UN Number:	UN2920
UN PROPER SHIPPING NAME:	CORROSIVE LIQUID, FLAMMABLE, N.O.S.
TECHNICAL NAME (N.O.S.):	ISOBUTANOL, DIMETHYL ACID PYROPHOSPHATE
Transport Hazard Class:	8
Subsidiary Class:	3
Transport Label Required:	Corrosive Flammable liquid
Packing Group:	II

ICAO / IATA

Dangerous Goods?	X
UN Number:	UN2920
UN PROPER SHIPPING NAME:	CORROSIVE LIQUID, FLAMMABLE, N.O.S.
TECHNICAL NAME (N.O.S.):	ISOBUTANOL, DIMETHYL ACID PYROPHOSPHATE
Transport Hazard Class:	8
Subsidiary Class:	3
Transport Label Required:	Corrosive Flammable liquid
Packing Group:	II

14.6 SPECIAL PRECAUTIONS FOR USER

Protect against external heat sources higher than +50°C.

14.7 MARITIME TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS

No information available

SECTION 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Ozone Depleting Substances (Regulation (EC) No 1005/2009): Not applicable
Persistent Organic Pollutants (Regulation (EC) No 850/2004): Not applicable
Prior Informed Consent (Regulation (EC) No 689/2008): Not applicable
Substances subject to Authorization (Annex XIV of Regulation (EC) No 1907/2006): Not applicable

Substances subject to Restrictions for certain applications(Annex XVII of Regulation(EC)No 1907/2006): Yes
Refer to Annex XVII of REACH for details of the restricted applications.

Isobutanol (49 %)
This substance is a flammable restricted for aerosols under item 40.

Water Endangering Class (Germany): 1 according to AwSV, 18.04.2017

Inventory Information

European Economic Area (including EU): When purchased and shipped from an Allnex legal entity based in the EEA (EU or Norway), this product is compliant with the registration of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt and/or registered.

United Kingdom: When purchased from allnex UK this product is compliant with the UK-REACH Regulation as all its components are either notified, excluded, exempt and/or registered. If the material has been purchased by your legal entity based in GB from an allnex legal entity based in the EEA (EU or Norway) in 2019 or 2020, you can continue to import the material into GB as it is covered by allnex DUIN.

United States (USA): All components of this product are designated as “Active” on the TSCA Inventory or are not required to be listed.

Canada: One or more components of this product are NOT included on the Canadian Domestic Substances List (DSL). These components are included on the Canadian Non-Domestic Substances List (NDSL).

Australia: One or more components of this product have NOT yet been included in the Australian Inventory of Industrial Chemicals (AIIC) or assessed by AICIS.

New Zealand: This product is NOT approved under the Hazardous Substances and New Organisms (HSNO) Act.

China: One or more components of this product are NOT included on the Chinese (IECSC) inventory.

Japan: All components of this product are included on the Japanese (ENCS and ISHL) inventories or are not required to be listed on the Japanese inventories.

Korea: One or more components of this product are NOT included on the Korean (ECL) inventory.

Philippines: One or more components of this product are NOT included on the Philippine (PICCS) inventory.

Taiwan: One or more components of this product are NOT included in the Taiwan chemical substance inventory (TCSI).

Switzerland: All components of this product are exempt from the new substance notification requirements for Switzerland (SR 813.11 art. 24-26).

15.2 CHEMICAL SAFETY ASSESSMENT

No Chemical Safety Assessment has been carried out.

SECTION 16: OTHER INFORMATION

Reasons for Issue: Revised Section 1

Date Prepared: 07-Dec-2023
Date of last significant revision: 28-Nov-2023

Classification methods include one or more of the following: use of specific product data, read-across data, modeling, professional judgment or a component based evaluation.

Component - Hazard Statements
Isobutanol
H226 - Flammable liquid and vapour.

H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.

Dimethyl acid pyrophosphate
H314 - Causes severe skin burns and eye damage.

Phosphoric acid
H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.

Trimethyl phosphate
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H340 - May cause genetic defects.
H351 - Suspected of causing cancer.

Uses covered for this mixture under REACH
Consolidated from the exposure scenarios of the substances present in this mixture

No.	Short Title	**Sector of Use (SU)**	**Product Category (PC)**	**Process Category (PROC)**	**Environmental Release Category (ERC)**	Risk Management Measures/ Operational Conditions (RMM/OC)
1	Formulation & (re)packing of substances and mixtures	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites		PROC1 PROC2 PROC3 PROC4 PROC5 PROC8a PROC8b PROC9 PROC15	ERC2	Included in Section 8 of this SDS
2	Industrial application of coatings and inks	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites		PROC1 PROC2 PROC3 PROC4 PROC5 PROC7 PROC8a PROC8b PROC9 PROC10 PROC13 PROC15	ERC4	Available on request*
3	Professional application of coatings and inks	SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)		PROC1 PROC2 PROC3 PROC4 PROC5 PROC8a PROC8b PROC9 PROC10 PROC11 PROC13 PROC15 PROC19	ERC8a ERC8c ERC8d ERC8f	Available on request*

* Contact ALLNEX (PSRA-customer-requests@allnex.com) for detailed Exposure Scenario information on the substances present in this mixture.

Emergency phone numbers for other regions

Asia Pacific
Australia: +61 1800 022 037 (Allnex Australia)
China (PRC): +86 532 8388 9090 (NRCC)
India: 000 800 100 7479 (toll free) or +65 3158 1198 (Carechem 24)
Indonesia: 007 803 011 0293 (Carechem 24)
Japan: 0120 015 230 (toll free) (Carechem24)
Korea: +82 2 3479 8401 (Carechem 24)
Malaysia: +60 3 6207 4347 (Carechem 24)
New Zealand: +64 0800 803 002 (Allnex New Zealand)
Philippines: +63 2 231 2149 (Carechem 24)

Taiwan: +886 2 8793 3212 (Carechem 24)
Vietnam: +84 8 4458 2388 (Carechem 24)
All Others: +65 3158 1074 (Carechem 24)

Latin America

Brazil: +55-800-707-7022 (toll free) or +55-11-98149-0850 (Suatrans 24)
Chile: +56 2 2582 9336 (Carechem 24)
Mexico and all others: +52-555-004-8763 (Carechem 24)

Canada and USA

+1-866-928-0789 (toll free) or +1-215-207-0061 (Carechem 24 - Allnex29003-NCEC)

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