SAFETY DATA SHEET
according to the OSHA Hazard Communication Standard

Dynasolve® 711

Version	Revision Date:	SDS Number:	Date of first issue:
1.0	10/11/2024	70MDGM661357	10/11/2024

SECTION 1. IDENTIFICATION

Product name : Dynasolve® 711

Product number : 661357

Manufacturer or supplier's details

Company : Versum Materials US, LLC 8555 South River Parkway Tempe, AZ 85284-2601Exporter EIN No. 47-5632014
www.emdgroup.com/electronics Telephone: 800 837 2724

Emergency telephone : 1-800-424-9300 CHEMTREC (USA) 1-703-741-5970
CHEMTREC (International) 24 Hours/day; 7 Days/week

Recommended use of the chemical and restrictions on use

Recommended use : Semiconductor Processing
Polymer Remover

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Reproductive toxicity : Category 1B

Specific target organ toxicity - single exposure : Category 1 (Central nervous system, optic nerve)

Specific target organ toxicity - single exposure : Category 3 (Respiratory system, Central nervous system)

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H360 May damage fertility or the unborn child.
H370 Causes damage to organs (Central nervous system, optic nerve).

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233 Keep container tightly closed.
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.
P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labeling

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 2.75 %

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Propan-2-ol, 1-methoxy-	107-98-2	>= 50 - < 70
1-Phenoxy-2-propanol	770-35-4	>= 20 - < 30
Methyl-2-pyrrolidinone, 1-	872-50-4	>= 20 - < 30
Methyl alcohol	67-56-1	>= 1 - < 5
Potassium Hydroxide	1310-58-3	>= 1 - < 5

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : First aider needs to protect himself.
Show this material safety data sheet to the doctor in attendance.

If inhaled : fresh air. Immediately call in physician.
If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Call a physician immediately.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Seek medical treatment immediately.
Remove contact lenses.

If swallowed : immediately make victim drink water (two glasses at most).
Consult a physician.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : irritant effects
somnolence
Drowsiness
Cough
Shortness of breath

Notes to physician : No information available.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water
Dry powder
Foam
Carbon dioxide (CO2)

Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

Specific hazards during fire fighting : Combustible.

Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air at elevated temperatures.
Development of hazardous combustion gases or vapours possible in the event of fire.

Fire may cause evolution of:
Carbon oxides
Nitrogen oxides (NOx)

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.
Suppress (knock down) gases/vapors/mists with a water spray jet.
Cool closed containers exposed to fire with water spray.

Special protective equipment : Stay in danger area only with self-contained breathing appa-

for fire-fighters	ratus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8. If possible, stop flow of product.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Risk of explosion.
Methods and materials for containment and cleaning up	:	Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.
Advice on safe handling	:	Provide sufficient air exchange and/or exhaust in work rooms. Emergency showers and eye wash stations should be readily accessible. Empty containers may contain residue which can be dangerous – do not pressurize, cut, weld, drill, grind and also do not expose such containers to heat, flame, sparks, or other ignition sources. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Observe label precautions.
Conditions for safe storage	:	Store in original container.
Further information on storage conditions	:	Keep away from heat and sources of ignition. Keep container tightly closed in a dry and well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Protected from light. Risks from decomposition products: see section 10

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parame-ters / Permissible concentration	Basis
Propan-2-ol, 1-methoxy-	107-98-2	TWA	50 ppm	ACGIH
		STEL	100 ppm	ACGIH
		ST	150 ppm 540 mg/m3	NIOSH REL
		TWA	100 ppm 360 mg/m3	NIOSH REL
		TWA	100 ppm 360 mg/m3	OSHA P0
		STEL	150 ppm 540 mg/m3	OSHA P0
Methyl-2-pyrrolidinone, 1-	872-50-4	TWA	15 ppm 60 mg/m3	US WEEL
		STEL	30 ppm 120 mg/m3	US WEEL
Methyl alcohol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		ST	250 ppm 325 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	OSHA Z-1
		TWA	200 ppm 260 mg/m3	OSHA P0
		STEL	250 ppm 325 mg/m3	OSHA P0
Potassium Hydroxide	1310-58-3	C	2 mg/m3	ACGIH
		C	2 mg/m3	NIOSH REL

		C	2 mg/m3	OSHA P0

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentra-tion	Basis
Methyl-2-pyrrolidinone, 1-	872-50-4	5-Hydroxy-N-methyl-2-pyrrolidone	Urine	End of shift (As soon as possible after exposure ceases)	100 mg/l	ACGIH BEI
Methyl alcohol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

Engineering measures : Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7

Personal protective equipment

Respiratory protection : Respirator with filter for organic vapor
Wear appropriate respirator when ventilation is inadequate. required when vapours/aerosols are generated.

Hand protection

Remarks : Solvent-resistant gloves Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk as-sessment indicates this is necessary.

Protective measures : Wear suitable protective clothing, gloves and eye/face pro-tection.

Eye protection : Safety glasses

Body Protection : Flame retardant protective clothing
If there is any possibility of direct contact or exposure, wear chemical resistant protective clothing.

Hygiene measures : Avoid contact with skin, eyes and clothing.

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	blue green
Odor	:	ether-like
Odor Threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Boiling point/boiling range	:	248 °F / 120 °C
Flammability (solid, gas)	:	Remarks: Combustible.
Decomposition temperature	:	No data available
Flash point	:	39 °C Method: Pensky-Martens closed cup
Auto-ignition temperature	:	Information on components: Methyl-2-pyrrolidinone, 1- 473 °F / 245 °C (1,013 hPa) Method: DIN 51794
Upper explosion limit / Upper flammability limit	:	> 16 %(V) Medium: Upper flammability limit
Lower explosion limit / Lower flammability limit	:	1.7 %(V) Medium: Lower flammability limit
Vapor pressure	:	17.94 hPa
Relative vapor density	:	No data available

Relative density	:	(water = 1) 0.99
Density	:	0.99 g/cm3
Solubility(ies) Water solubility	: :	 miscible
Partition coefficient: n-octanol/water	:	No data available
Evaporation rate	:	No data available
Viscosity	:	No data available
Explosive properties	:	Not classified as explosive.
Oxidizing properties	:	none

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Vapor/air-mixtures are explosive at intense warming. Formation of peroxides possible.
Chemical stability	:	Sensitivity to light Sensitive to air.
Possibility of hazardous reactions	:	no information available
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Aluminum Light metals various plastics
Hazardous decomposition products	:	Peroxides in the event of fire: See section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Eye contact
Skin contact

Acute toxicity

Product:

Acute oral toxicity	:	Acute Toxicity Estimate (ATE): 1,439 mg/kg Method: Calculation method Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
Acute inhalation toxicity	:	Acute Toxicity Estimate (ATE): 88.24 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract
Acute dermal toxicity	:	Acute Toxicity Estimate (ATE): > 5,000 mg/kg Method: Calculation method Symptoms: Skin irritation

Components:

Propan-2-ol, 1-methoxy-:

Acute oral toxicity	:	LD50 (Rat, male): 3,739 mg/kg Method: EC Directive 92/69/EEC B.1 Acute Toxicity (Oral) GLP: yes Remarks: (ECHA)
Acute inhalation toxicity	:	LC50 (Rat): 32 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403 GLP: yes Assessment: The substance or mixture has no acute inhalation toxicity Remarks: (ECHA)
Acute dermal toxicity	:	LD50 (Rabbit): 13,000 mg/kg Remarks: (OECD SIDS)

1-Phenoxy-2-propanol:

Acute oral toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg

Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.4 mg/l
Exposure time: 4 h
Test atmosphere: aerosol
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity

Methyl-2-pyrrolidinone, 1-:

Acute oral toxicity : LD50 (Rat, male and female): 4,150 mg/kg
Method: OECD Test Guideline 401
Remarks: (ECHA)

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.1 mg/l
Exposure time: 4 h
Test atmosphere: aerosol
Method: OECD Test Guideline 403
GLP: yes
Remarks: (ECHA)

Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
Remarks: (ECHA)

Assessment: The substance or mixture has no acute dermal toxicity

Methyl alcohol:

Acute oral toxicity : LD50 (Rat): 100 mg/kg
Remarks: (ECHA)

Acute inhalation toxicity : LC50 (Rat): 3 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Converted acute toxicity point estimate
Remarks: (ECHA)

Acute dermal toxicity : LD50 (Rabbit): 300 mg/kg
Method: Converted acute toxicity point estimate

(Human): Method: Expert judgement

Remarks: The component/mixture is toxic after single contact with skin.
(ECHA)

Potassium Hydroxide:

Acute oral toxicity	:	LD50 (Rat, male): 333 mg/kg Method: OECD Test Guideline 425 Remarks: (ECHA)
Acute inhalation toxicity	:	Assessment: Toxic effects cannot be excluded
Acute dermal toxicity	:	Assessment: Toxic effects cannot be excluded

Skin corrosion/irritation

Product:

No data available

Components:

Propan-2-ol, 1-methoxy-:

Species	:	Rabbit
Exposure time	:	4 h
Method	:	Regulation (EC) No. 440/2008, Annex, B.4
Result	:	No skin irritation
GLP	:	yes
Remarks	:	(ECHA)

1-Phenoxy-2-propanol:

Species	:	Rabbit
Exposure time	:	24 h
Method	:	OECD Test Guideline 404
Result	:	No irritation
GLP	:	yes

Methyl-2-pyrrolidinone, 1-:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Skin irritation
GLP	:	yes
Remarks	:	(ECHA)

Methyl alcohol:

Species	:	Rabbit
Result	:	No skin irritation
Remarks	:	(ECHA)

Potassium Hydroxide:

Species	:	In vitro study

Method	:	OECD Test Guideline 431
Result	:	Causes severe burns.
Remarks	:	(ECHA)

Serious eye damage/eye irritation

Product:

No data available

Components:

Propan-2-ol, 1-methoxy-:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	Regulation (EC) No. 440/2008, Annex, B.5
GLP	:	yes
Remarks	:	(ECHA)

1-Phenoxy-2-propanol:

Species	:	Rabbit
Result	:	irritating
Method	:	OECD Test Guideline 405
GLP	:	yes
Remarks	:	(ECHA)

Methyl-2-pyrrolidinone, 1-:

Species	:	Rabbit
Result	:	irritating
Method	:	OECD Test Guideline 405
Remarks	:	(ECHA)

Methyl alcohol:

Species	:	Rabbit
Result	:	No eye irritation
Remarks	:	(ECHA)

Potassium Hydroxide:

Species	:	Rabbit
Result	:	Causes burns.
Method	:	OECD Test Guideline 405

Respiratory or skin sensitization

Product:

No data available

Components:

Propan-2-ol, 1-methoxy-:

Test Type	:	Sensitisation test:

Routes of exposure	:	Skin
Species	:	Guinea pig
Result	:	negative
Remarks	:	(ECHA)

1-Phenoxy-2-propanol:

Routes of exposure	:	Skin
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative
GLP	:	yes
Remarks	:	(ECHA)

Methyl-2-pyrrolidinone, 1-:

Routes of exposure	:	Skin
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Not a skin sensitizer.
Remarks	:	(ECHA)

Test Type	:	Patch test:
Routes of exposure	:	Skin
Species	:	Human
Result	:	negative
Remarks	:	(IUCLID)

Methyl alcohol:

Test Type	:	Sensitisation test:
Routes of exposure	:	Skin
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitization.
Remarks	:	(ECHA)

Potassium Hydroxide:

Test Type	:	Sensitisation test:
Routes of exposure	:	Skin
Species	:	Guinea pig
Result	:	negative
Remarks	:	(ECHA)

Germ cell mutagenicity

Product:

No data available

Components:

Propan-2-ol, 1-methoxy-:

Genotoxicity in vitro	:	Test Type: gene mutation test

Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: (ECHA)

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: intratracheal
Method: OECD Test Guideline 474
Result: negative
Remarks: (ECHA)

Methyl-2-pyrrolidinone, 1-:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: (ECHA)

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: (ECHA)

Test Type: unscheduled DNA synthesis assay
Test system: mammalian cells
Method: OECD Test Guideline 482
Result: negative
GLP: yes
Remarks: (ECHA)

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative
GLP: yes
Remarks: (ECHA)

Test Type: Chromosome aberration test
Species: Chinese hamster (male and female)
Cell type: Bone marrow
Application Route: Oral
Method: OECD Test Guideline 475

Result: negative
GLP: yes
Remarks: (ECHA)

Methyl alcohol:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: (ECHA)

Test Type: In vitro mammalian cell gene mutation test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
Remarks: (ECHA)

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative
Remarks: (ECHA)

Potassium Hydroxide:

Genotoxicity in vitro : Test Type: Ames test
Test system: Escherichia coli/Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: (ECHA)

Carcinogenicity

Product:

No data available

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.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

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.

Reproductive toxicity

Product:

No data available

Components:

Methyl-2-pyrrolidinone, 1-:

Reproductive toxicity - Assessment	:	Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

STOT-single exposure

Product:

No data available

Components:

Propan-2-ol, 1-methoxy-:

Routes of exposure	:	Inhalation
Target Organs	:	Central nervous system
Assessment	:	May cause drowsiness or dizziness.
Remarks	:	(OECD SIDS)

Methyl-2-pyrrolidinone, 1-:

Target Organs	:	Respiratory system
Assessment	:	May cause respiratory irritation.

Methyl alcohol:

Target Organs	:	Central nervous system, optic nerve
Assessment	:	Causes damage to organs.

STOT-repeated exposure

Product:

No data available

Components:

Propan-2-ol, 1-methoxy-:

Species	:	Rabbit, male and female
NOAEL	:	> 1,000 mg/kg
Application Route	:	Dermal
Exposure time	:	21 d
Number of exposures	:	N11.00019274
Method	:	OECD Test Guideline 410
GLP	:	yes
Remarks	:	Subacute toxicity (ECHA)

Methyl alcohol:

Species	:	Rat, male and female
NOAEL	:	6.66 mg/l
Application Route	:	Inhalation
Test atmosphere	:	vapour
Exposure time	:	28 d

Number of exposures	:	N11.00019274
Method	:	OECD Test Guideline 412
Remarks	:	Subacute toxicity
Species	:	Rat, male and female
NOAEL	:	0.13 mg/l
LOAEL	:	1.3 mg/l
Application Route	:	Inhalation
Exposure time	:	365 d
Number of exposures	:	N11.00019274
Method	:	OECD Test Guideline 453

Aspiration toxicity

Product:

No data available

Further information

Product:

Remarks	:	Other dangerous properties can not be excluded. This substance should be handled with particular care. The product has not been tested. The information is derived from the properties of the individual components.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Propan-2-ol, 1-methoxy-:

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 4,600 - 10,000 mg/l Exposure time: 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 500 mg/l Exposure time: 48 h Method: Regulation (EC) No. 440/2008, Annex, C.2 Remarks: (ECHA)
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l Exposure time: 168 h GLP: yes Remarks: (ECHA)
Toxicity to microorganisms	:	IC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

GLP: yes
Remarks: (ECHA)

1-Phenoxy-2-propanol:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 280 mg/l Exposure time: 96 h GLP: no
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 370 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 GLP: no
Toxicity to algae/aquatic plants	:	NOEC (Desmodesmus subspicatus (green algae)): 25 mg/l Exposure time: 72 h GLP: yes Remarks: (ECHA) ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h GLP: yes Remarks: (ECHA)
Toxicity to microorganisms	:	EC50 (activated sludge): > 1,000 mg/l Exposure time: 30 min Method: OECD Test Guideline 209 GLP: yes

Methyl-2-pyrrolidinone, 1-:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 500 mg/l Exposure time: 96 h Analytical monitoring: yes Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 24 h Remarks: (ECHA)
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): > 500 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 12.5 mg/l End point: reproduction rate Exposure time: 21 d Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes
Toxicity to microorganisms	:	EC50 (activated sludge): > 600 mg/l Exposure time: 0.5 h Method: ISO 8192

Methyl alcohol:

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l Exposure time: 96 h Test Type: flow-through test Method: US-EPA Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 18,260 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 202 Remarks: (ECHA)
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 22,000 mg/l Exposure time: 96 h Method: OECD Test Guideline 201 Remarks: (ECHA)
Toxicity to fish (Chronic toxicity)	:	NOEC (Oryzias latipes (Orange-red killifish)): 7,900 mg/l Exposure time: 200 h Remarks: (External SDS)
Toxicity to microorganisms	:	EC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h Analytical monitoring: yes Method: OECD Test Guideline 209 Remarks: (ECHA)

Potassium Hydroxide:

Ecotoxicology Assessment

Chronic aquatic toxicity	:	This product has no known ecotoxicological effects.

Persistence and degradability

Components:

Propan-2-ol, 1-methoxy-:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 96 % Exposure time: 28 d Method: OECD Test Guideline 301E GLP: yes Remarks: (ECHA)

1-Phenoxy-2-propanol:

Biodegradability	:	Inoculum: activated sludge Result: Readily biodegradable.

Biodegradation: 72 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

Methyl-2-pyrrolidinone, 1-:

Biodegradability	:	Inoculum: activated sludge Concentration: 100 mg/l Result: Readily biodegradable. Biodegradation: 73 % Exposure time: 28 d
Biochemical Oxygen Demand (BOD)	:	1,100 mg/g Incubation time: 5 d Remarks: (Lit.)
Chemical Oxygen Demand (COD)	:	1,600 mg/g Remarks: (Lit.)
BOD/ThOD	:	99 % Remarks: (IUCLID)

Methyl alcohol:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 99 % Exposure time: 30 d Method: OECD Test Guideline 301D
Biochemical Oxygen Demand (BOD)	:	600 - 1,120 mg/g Incubation time: 5 d Remarks: (IUCLID)
Chemical Oxygen Demand (COD)	:	1,420 mg/g Remarks: (IUCLID)
BOD/COD	:	BOD/COD: 76 % Remarks: (IUCLID)
ThOD	:	1.500 mg/g Remarks: (Lit.)
BOD/ThOD	:	76 % Remarks: Closed Bottle test (IUCLID)

Potassium Hydroxide:

Biodegradability	:	Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

Components:

Propan-2-ol, 1-methoxy-:

Partition coefficient: n-octanol/water	:	log Pow: < 1 (68 °F / 20 °C) pH: 6.8 Method: OECD Test Guideline 117 Remarks: Bioaccumulation is not expected.

Methyl-2-pyrrolidinone, 1-:

Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water	:	log Pow: -0.46 (77 °F / 25 °C) Method: OECD Test Guideline 107 Remarks: Bioaccumulation is not expected.

Methyl alcohol:

Partition coefficient: n-octanol/water	:	log Pow: -0.77 Method: (experimental) Remarks: (Lit.) Bioaccumulation is not expected.

Potassium Hydroxide:

Partition coefficient: n-octanol/water	:	Remarks: Not applicable for inorganic substances

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	No ecological testing was carried out on the preparation.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	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 : When discarding an empty container, the contaminated to the inside is removed completely and it discards according to your local regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 1993
Proper shipping name	:	Flammable liquid, n.o.s. (Propan-2-ol, 1-methoxy-, Methyl alcohol)
Class	:	3
Packing group	:	III
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355

IMDG-Code

UN number	:	UN 1993
Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (Propan-2-ol, 1-methoxy-, Methyl alcohol)
Class	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-E
Marine pollutant	:	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR Road

UN/ID/NA number	:	UN 1993
Proper shipping name	:	Flammable liquids, n.o.s. (Propan-2-ol, 1-methoxy-, Methyl alcohol)
Class	:	3
Packing group	:	III
Labels	:	FLAMMABLE LIQUID

ERG Code : 128
Marine pollutant : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Methyl alcohol	67-56-1	100	100 (F003)

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Methyl-2-pyrrolidinone, 1-	872-50-4	>= 20 - < 30 %
Methyl alcohol	67-56-1	>= 1 - < 5 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

Methyl alcohol	67-56-1	>= 1 - < 5 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

Methyl alcohol	67-56-1	>= 1 - < 5 %

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Potassium Hydroxide	1310-58-3	>= 1 - < 5 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Potassium Hydroxide	1310-58-3	>= 1 - < 5 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307
This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

Propan-2-ol, 1-methoxy-	107-98-2
Methyl-2-pyrrolidinone, 1-	872-50-4
Methyl alcohol	67-56-1
Potassium Hydroxide	1310-58-3

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Methyl-2-pyrrolidinone, 1-	872-50-4
Methyl alcohol	67-56-1

TSCA list

No substances are subject to a Significant New Use Rule.

The following substance(s) is/are subject to TSCA 12(b) export notification requirements:
Methyl-2-pyrrolidinone, 1- 872-50-4

The ingredients of this product are reported in the following inventories:

TSCA	:	All substance listed on the TSCA Active Inventory
DSL	:	All components of this product are on the Canadian DSL

SECTION 16. OTHER INFORMATION

Revision Date : 10/11/2024

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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