

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Issue date: 09/19/2022

SECTION 1: Identification		
.1. Identification		
Product form	: Mixture	
Product name	: JB-4 MINI KIT SOL.B (ACCELERATOR)	
Product code	: 22507B	
.2. Recommended use and restrictions of		
Recommended use	: Use as laboratory reagent, Manufacture of substances	
.3. Supplier	. Ose as laboratory reagent, manufacture of substances	
Supplier Polysciences 400 Valley Road Warrington, PA 18976 - United States T +1 215 343 6484 - F +1 215 343 0214		
info@polysciences.com - www.polysciences.com	<u>1</u>	
1.4. Emergency telephone number		
Emergency number	: 24-hour emergency phone number ChemTel 1-800-255-3	924
SECTION 2: Hazard(s) identification		
2.1. Classification of the substance or mix	xture	
GHS US classification		
Acute toxicity (oral) Category 4	Harmful if swallowed	
Acute toxicity (dermal) Category 4	Harmful in contact with skin	
Skin corrosion/irritation Category 2	Causes skin irritation	
Serious eye damage/eye irritation Category 2B	Causes eye irritation	
.2. GHS Label elements, including preca	utionary statements	
GHS US labeling		
Hazard pictograms (GHS US)		
Signal word (GHS US) Hazard statements (GHS US)	 Warning Harmful if swallowed or in contact with skin Causes skin irritation Causes eye irritation 	
Precautionary statements (GHS US)	 Wash hands, forearms and face thoroughly after handling Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/i If swallowed: Call a poison center or doctor if you feel unw If on skin: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minute and easy to do. Continue rinsing. 	face protection. /ell.
2.3. Other hazards which do not result in	classification	
	classification	
2.3. Other hazards which do not result in No additional information available 2.4. Unknown acute toxicity (GHS US)	classification	
No additional information available 2.4. Unknown acute toxicity (GHS US)	classification	
to additional information available .4. Unknown acute toxicity (GHS US) tot applicable		
No additional information available 2.4. Unknown acute toxicity (GHS US) Not applicable SECTION 3: Composition/Information		
No additional information available 2.4. Unknown acute toxicity (GHS US) Not applicable SECTION 3: Composition/Information 8.1. Substances		
No additional information available 2.4. Unknown acute toxicity (GHS US) Not applicable SECTION 3: Composition/Information 3.1. Substances Not applicable		
No additional information available 2.4. Unknown acute toxicity (GHS US) Not applicable SECTION 3: Composition/Information 3.1. Substances Not applicable		GHS US classification

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Name	Product identifier	%	GHS US classification
N,N-Dimethylaniline	(CAS-No.) 121-69-7	5 – 9	Flam. Liq. 4, H227 Acute Tox. 1 (Oral), H300 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Carc. 1B, H350 Carc. 2, H351 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
1,4-dioxane	(CAS-No.) 123-91-1	0 – 5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335
Acetaldehyde	(CAS-No.) 75-07-0	0 – 5	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Muta. 2, H341 Carc. 1A, H350 STOT SE 3, H335 Aquatic Acute 2, H401
Ethylene oxide	(CAS-No.) 75-21-8	0 – 5	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:gas), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1A, H350 STOT SE 3, H335 Aquatic Acute 3, H402
Formaldehyde	(CAS-No.) 50-00-0	0 – 5	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H311 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures		
4.1. Description of first aid measures		
First-aid measures general	: Call a poison center/doctor/physician if you feel unwell.	
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.	
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.	
First-aid measures after eye contact	 Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. 	
First-aid measures after ingestion	: Rinse mouth. Call a poison center/doctor/physician if you feel unwell.	
4.2. Most important symptoms and effect	s (acute and delayed)	
Symptoms/effects after skin contact	: Irritation.	
Symptoms/effects after eye contact	: Mild eye irritation.	
4.3. Immediate medical attention and spe	cial treatment, if necessary	
Treat symptomatically.		
SECTION 5: Fire-fighting measures		

5.1.	Suitable (and unsuitable) extinguishin	g media
Suitable	e extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
5.2.	Specific hazards arising from the cher	nical
Hazardo fire	ous decomposition products in case of	: Toxic fumes may be released.

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5.3. Special protective equipment and	precautions for fire-fighters
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing
	apparatus. Complete protective clothing.
SECTION 6: Accidental release me	easures
6.1. Personal precautions, protective	equipment and emergency procedures
6.1.1. For non-emergency personnel	
Emergency procedures	: Ventilate spillage area. Avoid contact with skin, eyes and clothing.
6.1.2. For emergency responders	
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information
······································	refer to section 8: "Exposure controls/personal protection".
6.2. Environmental precautions	
Avoid release to the environment.	
6.3. Methods and material for contain	ment and cleaning up
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.
6.4. Reference to other sections For further information refer to section 13.	
SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Precautions for safe handling	: Ensure good ventilation of the work station. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
7.2. Conditions for safe storage, inclu	uding any incompatibilities
7.2. Conditions for safe storage, inclu Storage conditions	iding any incompatibilities : Store at room temp. Keep cool. Store in a well-ventilated place.
Storage conditions	: Store at room temp. Keep cool. Store in a well-ventilated place.
Storage conditions SECTION 8: Exposure controls/pe	: Store at room temp. Keep cool. Store in a well-ventilated place.
Storage conditions SECTION 8: Exposure controls/per 3.1. Control parameters	: Store at room temp. Keep cool. Store in a well-ventilated place.
Storage conditions SECTION 8: Exposure controls/per 3.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR)	: Store at room temp. Keep cool. Store in a well-ventilated place.
Storage conditions SECTION 8: Exposure controls/pe 8.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available	: Store at room temp. Keep cool. Store in a well-ventilated place.
Storage conditions SECTION 8: Exposure controls/pe 8.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1)	: Store at room temp. Keep cool. Store in a well-ventilated place.
Storage conditions SECTION 8: Exposure controls/per B.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure L	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits
Storage conditions SECTION 8: Exposure controls/per 3.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure I Local name	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits 1,4-Dioxane
Storage conditions SECTION 8: Exposure controls/per S.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure L Local name ACGIH TWA (ppm)	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits 1,4-Dioxane 20 ppm
Storage conditions SECTION 8: Exposure controls/per 3.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure I Local name	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits 1,4-Dioxane
Storage conditions SECTION 8: Exposure controls/per 8.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure L Local name ACGIH TWA (ppm)	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits 1,4-Dioxane 20 ppm TLV® Basis: Liver dam. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) Skin - potential significant contribution to overall exposure by the cutaneous route,
Storage conditions SECTION 8: Exposure controls/pe 8.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure L Local name ACGIH TWA (ppm) Remark (ACGIH) ACGIH chemical category	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits 1,4-Dioxane 20 ppm TLV® Basis: Liver dam. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Storage conditions SECTION 8: Exposure controls/pe 8.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure L Local name ACGIH TWA (ppm) Remark (ACGIH)	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits 1,4-Dioxane 20 ppm TLV® Basis: Liver dam. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans ACGIH 2018
Storage conditions SECTION 8: Exposure controls/pe 8.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure I Local name ACGIH TWA (ppm) Remark (ACGIH) ACGIH chemical category Regulatory reference	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits 1,4-Dioxane 20 ppm TLV® Basis: Liver dam. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans ACGIH 2018
Storage conditions SECTION 8: Exposure controls/pel 8.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure L Local name ACGIH TWA (ppm) Remark (ACGIH) ACGIH chemical category Regulatory reference USA - OSHA - Occupational Exposure L Local name	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits 1,4-Dioxane 20 ppm TLV® Basis: Liver dam. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) Kin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans) ACGIH 2018
Storage conditions	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits 1,4-Dioxane 20 ppm TLV® Basis: Liver dam. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) TLV® Basis: Liver dam. Notations Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans ACGIH 2018 .imits Dioxane (Diethylene dioxide)
Storage conditions SECTION 8: Exposure controls/per 3.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure L Local name ACGIH TWA (ppm) Remark (ACGIH) ACGIH chemical category Regulatory reference USA - OSHA - Occupational Exposure L Local name OSHA PEL (TWA) (mg/m ³)	Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Imits 1,4-Dioxane 20 ppm TLV® Basis: Liver dam. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans ACGIH 2018 Imits Dioxane (Diethylene dioxide) 360 mg/m³
Storage conditions SECTION 8: Exposure controls/pe 8.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure L Local name ACGIH TWA (ppm) Remark (ACGIH) ACGIH chemical category Regulatory reference USA - OSHA - Occupational Exposure L Local name OSHA PEL (TWA) (mg/m ³) OSHA PEL (TWA) (ppm)	 Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits Limits 1,4-Dioxane 20 ppm TLV® Basis: Liver dam. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans ACGIH 2018 Limits 100 ppm
Storage conditions SECTION 8: Exposure controls/pe 3.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure L Local name ACGIH TWA (ppm) Remark (ACGIH) ACGIH chemical category Regulatory reference USA - OSHA - Occupational Exposure L Local name OSHA PEL (TWA) (mg/m ³) OSHA PEL (TWA) (ppm) Limit value category (OSHA)	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits 1,4-Dioxane 20 ppm TLV® Basis: Liver dam. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans ACGIH 2018
Storage conditions SECTION 8: Exposure controls/pe 8.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure L Local name ACGIH TWA (ppm) Remark (ACGIH) ACGIH chemical category Regulatory reference USA - OSHA - Occupational Exposure L Local name OSHA PEL (TWA) (mg/m ³) OSHA PEL (TWA) (ppm) Limit value category (OSHA) Regulatory reference (US-OSHA)	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection Limits 1,4-Dioxane 20 ppm TLV® Basis: Liver dam. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans ACGIH 2018
Storage conditions SECTION 8: Exposure controls/pe 8.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure L Local name ACGIH TWA (ppm) Remark (ACGIH) ACGIH chemical category Regulatory reference USA - OSHA - Occupational Exposure L Local name OSHA PEL (TWA) (mg/m³) OSHA PEL (TWA) (ppm) Limit value category (OSHA) Regulatory reference (US-OSHA) USA - IDLH - Occupational Exposure Lin	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection rsonal protection I. Interface Store S
Storage conditions SECTION 8: Exposure controls/pe 8.1. Control parameters JB-4 MINI KIT SOL.B (ACCELERATOR) No additional information available 1,4-dioxane (123-91-1) USA - ACGIH - Occupational Exposure L Local name ACGIH TWA (ppm) Remark (ACGIH) ACGIH chemical category Regulatory reference USA - OSHA - Occupational Exposure L Local name OSHA PEL (TWA) (mg/m ³) OSHA PEL (TWA) (ppm) Limit value category (OSHA) Regulatory reference (US-OSHA) USA - IDLH - Occupational Exposure Lir US IDLH (ppm)	: Store at room temp. Keep cool. Store in a well-ventilated place. rsonal protection rsonal protection I. Interface Store S

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Acetaldehyde (75-07-0)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Acetaldehyde
ACGIH Ceiling (ppm)	25 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr. Notations: A2 (Suspected Human Carcinogen)
ACGIH chemical category	Suspected Human Carcinogen
Regulatory reference	ACGIH 2020
USA - OSHA - Occupational Exposure Limits	
Local name	Acetaldehyde
OSHA PEL (TWA) (mg/m ³)	360 mg/m ³
OSHA PEL (TWA) (ppm)	200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
US IDLH (ppm)	2000 ppm
N,N-Dimethylaniline (121-69-7)	
No additional information available	
Formaldehyde (50-00-0)	
No additional information available	
Polyethylene glycol (25322-68-3)	
USA - AIHA - Occupational Exposure Limits	
WEEL TWA (mg/m ³)	10 mg/m ³ (MW>200-aerosol)
Ethylene oxide (75-21-8)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethylene oxide
ACGIH TWA (ppm)	1 ppm
Remark (ACGIH)	TLV® Basis: Cancer; CNS impair. Notations: A2 (Suspected Human Carcinogen)
ACGIH chemical category	Suspected Human Carcinogen
Regulatory reference	ACGIH 2020
USA - ACGIH - Biological Exposure Indices	
Local name	ETHYLENE OXIDE
Biological Exposure Indices (BEI)	 5000 pmol/g Globin Parameter: N-(2-hydroxyethyl)valine (HEV) - Medium: hemoglobin adducts - Sampling time: Not critical - Notations: Ns 5 μg/g Kreatinin Parameter: S-(2-hydroxyethyl)mercapturic acid (HEMA) - Medium: urine - Sampling time: End of shift - Notations: Pop, Ns
ACGIH remark (BEI)	The value of HEV hemoglobin adducts applies to workers having representative Ethylene oxide exposure during the previous 120 days
Regulatory reference	ACGIH 2020
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) (ppm)	1 ppm
OSHA PEL (STEL) (ppm)	5 ppm (see 29 CFR 1910.1047)
USA - IDLH - Occupational Exposure Limits	
US IDLH (ppm)	800 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA) (mg/m ³)	0.18 mg/m³ (less than stated value)
NIOSH REL TWA [ppm]	0.1 ppm (less than stated value)
NIOSH REL (ceiling) (mg/m ³)	9 mg/m ³

8.2.	Appropriate engineering controls	
••••	riate engineering controls nmental exposure controls	Ensure good ventilation of the work station.Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

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Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties		
9.1. Information on basic physical and chemical properties		
Physical state	: Liquid	
Color	: Mixture contains one or more component(s) which have the following colour(s): Colorless	
Odor	 There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: ether-like Fruity 	
Odor threshold	: No data available	
pH	: No data available	
Melting point	: Not applicable	
Freezing point	: No data available	
Boiling point	: No data available	
Flash point	: No data available	
Relative evaporation rate (butyl acetate=1)	: No data available	
Flammability (solid, gas)	: Not applicable.	
Vapor pressure	: No data available	
Relative vapor density at 20°C	: No data available	
Relative density	: No data available	
Solubility	: No data available	
Partition coefficient n-octanol/water (Log Pow)	: No data available	
Auto-ignition temperature	: No data available	
Decomposition temperature	: No data available	
Viscosity, kinematic	: No data available	
Viscosity, dynamic	: No data available	
Explosion limits	: No data available	
Explosive properties	: No data available	
Oxidizing properties	: No data available	

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

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10.3.	Possibility of hazardous reactions
No dang	perous reactions known under normal conditions of use.
10.4.	Conditions to avoid
None un	ider recommended storage and handling conditions (see section 7).
10.5.	Incompatible materials
No addit	tional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information	1
11.1. Information on toxicological effects	
Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Harmful in contact with skin.
Acute toxicity (inhalation)	Not classified
ATE US (oral)	500 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
1,4-dioxane (123-91-1)	
LD50 oral rat	5170 mg/kg
LD50 dermal rabbit	7600 mg/kg
	Tooo mgrkg
Acetaldehyde (75-07-0)	660 mallea
LD50 oral rat	660 mg/kg 13000 ppm/4h
LC50 Inhalation - Rat [ppm]	
N,N-Dimethylaniline (121-69-7)	
LD50 oral rat	1410 µg/kg mg/Kg
LD50 dermal rabbit	1770 ml/kg mg/Kg
Polyethylene glycol (25322-68-3)	
LD50 oral rat	22 g/kg
LD50 dermal rabbit	> 20 g/kg
Ethylene oxide (75-21-8)	
LD50 oral rat	72 mg/kg
LC50 Inhalation - Rat [ppm]	800 ppm/4h
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes eye irritation.
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
1,4-dioxane (123-91-1)	
NOAEL (chronic,oral,animal/male,2 years)	94 mg/kg body weight Animal: rat, Animal sex: male, Remarks on results: other:Effect type: carcinogenicity (migrated information)
NOAEL (chronic,oral,animal/female,2 years)	148 mg/kg body weight Animal: rat, Animal sex: female, Remarks on results: other:Effect type: carcinogenicity (migrated information)
IARC group	2B - Possibly carcinogenic to humans
National Toxicity Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
In OSHA Hazard Communication Carcinogen list	Yes
Acetaldehyde (75-07-0)	·
IARC group	2B - Possibly carcinogenic to humans, 1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
In OSHA Hazard Communication Carcinogen list	Yes
N,N-Dimethylaniline (121-69-7)	
IARC group	3 - Not classifiable

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Formaldehyde (50-00-0)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	Known Human Carcinogens
Ethylene oxide (75-21-8)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	Known Human Carcinogens
In OSHA Hazard Communication Carcinogen	Yes
In OSHA Specifically Regulated Carcinogen list	t Yes
Reproductive toxicity	Not classified
STOT-single exposure	: Not classified
1,4-dioxane (123-91-1)	
STOT-single exposure	May cause respiratory irritation.
Acetaldehyde (75-07-0)	
STOT-single exposure	May cause respiratory irritation.
Formaldehyde (50-00-0)	
STOT-single exposure	May cause drowsiness or dizziness.
Polyethylene glycol (25322-68-3)	
STOT-single exposure	May cause respiratory irritation.
- ·	
Ethylene oxide (75-21-8)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
1,4-dioxane (123-91-1)	
NOAEC (inhalation,rat,vapor,90 days)	> 0.4 mg/l air Animal: rat
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Mild eye irritation.
ECTION 12: Ecological information	
2.1. Toxicity	
Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
1,4-dioxane (123-91-1)	
LC50 fish 1	> 10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	163 mg/l (Exposure time: 48 h - Species: water flea [Static])
LC50 fish 2	> 10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [semi-static])
NOEC (chronic)	1000 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	> 103 mg/l Test organisms (species): Pimephales promelas Duration: '32 d'
Acetaldehyde (75-07-0)	
LC50 fish 1	28.0 – 34.0 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	3.64 – 6.15 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	53 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 2	48.3 mg/l (Exposure time: 48 h - Species: Daphnia magna)
Ethylana axida (75.21.9)	
Ethylene oxide (75-21-8) LC50 fish 1	73 - 96 mg/l (Exposure time: 96 h. Species: Dimenholes premales)
EC50 Daphnia 1	73 – 96 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 137 – 300 mg/l (Exposure time: 48 h - Species: Daphnia magna)
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12.2. Persistence and degradability

No additional information available

12.3. **Bioaccumulative potential**

1,4-dioxane (123-91-1)				
BCF fish 1	0.2 – 0.7			
Partition coefficient n-octanol/water (Log Pow) -0.42				
Acetaldehyde (75-07-0)				
Partition coefficient n-octanol/water (Log Pow) 0.5				
Ethylene oxide (75-21-8)				
Partition coefficient n-octanol/water (Log Pow)	-0.3 (at 25 °C)			

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations	s
13.1. Disposal methods	
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
SECTION 14: Transport information	
Department of Transportation (DOT) In accordance with DOT	
Not applicable	
Transportation of Dangerous Goods	
Not applicable	
Transport by sea	
Not applicable	
Air transport	
Not applicable	
SECTION 15: Regulatory information	
15.1. US Federal regulations	
1,4-dioxane (123-91-1)	
Listed on the United States TSCA (Toxic Substa Subject to reporting requirements of United Stat Listed on EPA Hazardous Air Pollutant (HAPS)	tes SARA Section 313
CERCLA RQ	100 lb
Acetaldehyde (75-07-0)	
Listed on the United States TSCA (Toxic Substa	ances Control Act) inventory
Subject to reporting requirements of United Stat Listed on EPA Hazardous Air Pollutant (HAPS)	

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N,N-Dimethylaniline (121-69-7)					
Listed on the United States TSCA (Toxic Substan Subject to reporting requirements of United State Listed on EPA Hazardous Air Pollutant (HAPS)					
EPA TSCA Regulatory Flag	TP - TP - indicates a substance that is the subject of a proposed TSCA section 4 test rule.				
CERCLA RQ	100 lb				
Formaldehyde (50-00-0)					
Listed on the United States TSCA (Toxic Substan Subject to reporting requirements of United State Listed on EPA Hazardous Air Pollutant (HAPS)					
CERCLA RQ	100 lb				
RQ (Reportable quantity, section 304 of EPA's List of Lists)	100 lb				
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb				
Polyethylene glycol (25322-68-3)					
Listed on the United States TSCA (Toxic Substar	nces Control Act) inventory				
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).				
Ethylene oxide (75-21-8)					
Listed on the United States TSCA (Toxic Substar Subject to reporting requirements of United State Listed on EPA Hazardous Air Pollutant (HAPS)					
CERCLA RQ	10 lb				
RQ (Reportable quantity, section 304 of EPA's List of Lists)	10 lb				
Section 302 EPCRA Reportable Quantity (RQ)	10 lb				
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb				

15.2. International regulations

CANADA

1,4-dioxane (123-91-1)	
Listed on the Canadian DSL (Domestic Substances List)	
Acetaldehyde (75-07-0)	
Listed on the Canadian DSL (Domestic Substances List)	
Toxic Substance (CEPA – Schedule I)	Yes
N,N-Dimethylaniline (121-69-7)	
Listed on the Canadian DSL (Domestic Substances List)	
Formaldehyde (50-00-0)	
Listed on the Canadian DSL (Domestic Substances List)	
Polyethylene glycol (25322-68-3)	
Listed on the Canadian DSL (Domestic Substances List)	
Ethylene oxide (75-21-8)	
Listed on the Canadian DSL (Domestic Substances List)	
Toxic Substance (CEPA – Schedule I)	Yes

EU-Regulations

Polyethylene glycol (25322-68-3)
Listed on the EU NLP (No Longer Polymers) inventory
Ethylene oxide (75-21-8)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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1,4-dioxane (123-91-1)	
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)	
Acetaldehyde (75-07-0)	
isted as carcinogen on NTP (National Toxicology Program)	
Formaldehyde (50-00-0)	
isted on IARC (International Agency for Research on Cancer) isted as carcinogen on NTP (National Toxicology Program)	
Polyethylene glycol (25322-68-3)	
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on CICR (Turkish Inventory and Control of Chemicals) Listed on the TCSI (Taiwan Chemical Substance Inventory)	
Ethylene oxide (75-21-8)	
Listed on IARC (International Agency for Research on Cancer) Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals and Chemical Substances) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Japanese Poisonous and Deleterious Substances Control Law Japanese Pollutant Release and Transfer Register Law (PRTR Law) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on CICR (Turkish Inventory and Control of Chemicals) Listed on the TCSI (Taiwan Chemical Substance Inventory)	

1,4-dioxane (12	3-91-1)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	30 μg/day	
Acetaldehyde (7	75-07-0)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	90 μg/day (inhalation)	
Formaldehyde ((50-00-0)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	Νο	40 µg/day	

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Ethylene oxide	(75-21-8)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	Yes	Yes	Yes	2 μg/day	20 µg/day
Component		State or local regulations			
1,4-dioxane(123-91-1)		U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List			
Acetaldehyde(75-07-0)		U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania RTK (Right to Know) List			
Ethylene oxide(75-21-8)		U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S Pennsylvania - RTK (Right to Know) - Special Hazardous Substances; U.S Pennsylvania - RTK (Right to Know) List			
Formaldehyde(50-00-0)		U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List			
N,N-Dimethylaniline(121-69-7)		U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List			

SECTION 16: Other information

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