

## SECTION 1: Identification

### 1.1. Identification

Product form : Mixture  
Product name : SkyMark SM-IV

### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Hydraulic fluids  
Restrictions on use : No data available

### 1.3. Supplier

K&M Industry LLC  
5512 E Kelso St.  
Tucson, AZ 85712  
USA  
T 520.975.7286  
[contact@strutwipe.com](mailto:contact@strutwipe.com)

### 1.4. Emergency telephone number

Emergency number : 520.975.7286

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

#### GHS US classification

Skin corrosion/irritation Category 2	H315	Causes skin irritation
Carcinogenicity Category 2	H351	Suspected of causing cancer
Full text of H statements : see section 16		

### 2.2. GHS Label elements, including precautionary statements

#### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning

Hazard statements (GHS US) : H315 - Causes skin irritation  
H351 - Suspected of causing cancer

Precautionary statements (GHS US) : P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352 - If on skin: Wash with plenty of water.  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	Conc. (% w/w)
Tributyl phosphate	CAS-No.: 126-73-8	55 – 65
Dibutyl phenyl phosphate	CAS-No.: 2528-36-1	20 – 30
Butyl diphenyl phosphate	CAS-No.: 2752-95-6	5 – 10
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	CAS-No.: 62256-00-2	< 10
2,6-Di-tert-butyl-p-cresol	CAS-No.: 128-37-0	1

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 after inhalation	: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact	: Wash skin with plenty of water. If skin irritation or rash 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	: Call a poison center/doctor/physician if you feel unwell. Rinse mouth out with water.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: No adverse effects expected.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: May cause slight irritation.
Symptoms/effects after ingestion	: Possible irritation of mucous membranes and digestive tract, nausea, vomiting.
Chronic symptoms	: Suspected of causing cancer.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a water jet since it may cause the fire to spread.

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### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 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 measures

### 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. Do not breathe mist, spray, vapors. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### 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 containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Collect all waste in suitable and labeled containers and dispose according to local legislation.

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. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe mist, spray, vapors. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Handle in accordance with good industrial hygiene and safety procedures.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

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No additional information available

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<b>Tributyl phosphate (126-73-8)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Tributyl phosphate
ACGIH OEL TWA	5 mg/m <sup>3</sup> (IFV - Inhalable fraction and vapor)
Remark (ACGIH)	TLV® Basis: Bladder, eye, & URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEIc
Regulatory reference	ACGIH 2023
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Tributyl phosphate
OSHA PEL TWA [1]	5 mg/m <sup>3</sup>
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>Dibutyl phenyl phosphate (2528-36-1)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Dibutyl phenyl phosphate
ACGIH OEL TWA [ppm]	0.3 ppm
Remark (ACGIH)	TLV® Basis: Cholinesterase inhib; URT irr. Notations: Skin; BEIc
Regulatory reference	ACGIH 2023
<b>Butyl diphenyl phosphate (2752-95-6)</b>	
No additional information available	
<b>2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate (62256-00-2)</b>	
No additional information available	
<b>2,6-Di-tert-butyl-p-cresol (128-37-0)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Butylated hydroxytoluene
ACGIH OEL TWA	2 mg/m <sup>3</sup> (IFV - Inhalable fraction and vapor)
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2023
<b>8.2. Appropriate engineering controls</b>	
Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.
<b>8.3. Individual protection measures/Personal protective equipment</b>	
<b>Hand protection:</b>	
Protective gloves	
<b>Eye protection:</b>	
Safety glasses	
<b>Skin and body protection:</b>	
Wear suitable protective clothing	

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### 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
Appearance	: Oily liquid.
Color	: Purple
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available
Melting point	: -62 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 174 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 0.27 hPa
Relative vapor density at 20°C	: No data available
Relative density	: 1.0111
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: 469 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: 3.83 mm <sup>2</sup> /s (99 °C)
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: Not explosive.
Oxidizing properties	: Not oxidising.

### 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.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

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### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

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

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### Tributyl phosphate (126-73-8)

LD50 oral rat	1552 mg/kg
LD50 dermal rabbit	> 3100 mg/kg
LC50 Inhalation - Rat	> 4.242 mg/l
LC50 Inhalation - Rat (Dust/Mist)	> 4.242 mg/l

#### Dibutyl phenyl phosphate (2528-36-1)

LD50 oral rat	2620 mg/kg
LD50 dermal rabbit	> 5000 mg/kg

#### 2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate (62256-00-2)

LD50 oral rat	2000 mg/kg
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#### 2,6-Di-tert-butyl-p-cresol (128-37-0)

LD50 oral rat	> 6000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 2 mg/l

Skin corrosion/irritation : Causes skin irritation.  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Suspected of causing cancer.  
Reproductive toxicity : Not classified  
STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified  
Viscosity, kinematic : 3.83 mm<sup>2</sup>/s (99 °C)  
Symptoms/effects after inhalation : No adverse effects expected.  
Symptoms/effects after skin contact : Causes skin irritation.  
Symptoms/effects after eye contact : May cause slight irritation.  
Symptoms/effects after ingestion : Possible irritation of mucous membranes and digestive tract, nausea, vomiting.

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Chronic symptoms : Suspected of causing cancer.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Tributyl phosphate (126-73-8)	
LC50 - Fish [1]	17 mg/l
EC50 - Crustacea [1]	3.65 mg/l (48 h, Daphnia magna, Experimental value, Nominal concentration)
EC50 - Other aquatic organisms [1]	4.6 mg/l Test organisms (species): Gammarus sp.
EC50 72h - Algae [1]	2.8 mg/l
EC50 72h - Algae [2]	2.8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [1]	1.3 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
ErC50 algae	2.8 mg/l (DIN 38412-9, 72 h, Desmodesmus subspicatus, Fresh water, Weight of evidence, Nominal concentration)
NOEC (chronic)	1.3 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Butyl diphenyl phosphate (2752-95-6)	
LC50 - Fish [1]	2.381 mg/l
EC50 96h - Algae [1]	0.207 mg/l

2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate (62256-00-2)	
LC50 - Fish [1]	2.9 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	6.5 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	2.6 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

2,6-Di-tert-butyl-p-cresol (128-37-0)	
LC50 - Fish [1]	> 0.57 mg/l
EC50 - Crustacea [1]	0.48 mg/l
EC50 72h - Algae [1]	> 0.4 mg/l
LOEC (chronic)	1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.023 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

#### 12.2. Persistence and degradability

Tributyl phosphate (126-73-8)	
Persistence and degradability	Readily biodegradable in water.

Dibutyl phenyl phosphate (2528-36-1)	
Persistence and degradability	Readily biodegradable in water.

2,6-Di-tert-butyl-p-cresol (128-37-0)	
Persistence and degradability	Not readily biodegradable in water.

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<b>2,6-Di-tert-butyl-p-cresol (128-37-0)</b>	
Biochemical oxygen demand (BOD)	0.51 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.27 g O <sub>2</sub> /g substance
ThOD	2.977 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

<b>Tributyl phosphate (126-73-8)</b>	
BCF - Fish [1]	5.5 – 20 (Equivalent or similar to OECD 305, 6 week(s), Cyprinus carpio, Semi-static system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>Dibutyl phenyl phosphate (2528-36-1)</b>	
Partition coefficient n-octanol/water (Log Pow)	4.27
Bioaccumulative potential	Bioaccumable.

<b>2,6-Di-tert-butyl-p-cresol (128-37-0)</b>	
Partition coefficient n-octanol/water (Log Pow)	5.1
Bioaccumulative potential	Potential for bioaccumulation ( $4 \leq \text{Log Kow} \leq 5$ ).

### 12.4. Mobility in soil

<b>Tributyl phosphate (126-73-8)</b>	
Surface tension	25.1 mN/m (20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.241 – 3.371 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Low potential for mobility in soil.

<b>2,6-Di-tert-butyl-p-cresol (128-37-0)</b>	
Surface tension	Not applicable (water solubility < 1 mg/l)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	4.4 (log Koc, SRC PCKOCWIN v1.66, Calculated value)
Ecology - soil	Low potential for mobility in soil. May be harmful to plant growth, blooming and fruit formation.

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA



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DOT	TDG	IMDG	IATA
<b>14.1. UN number</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. Proper Shipping Name</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>			
Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available			

### 14.6. Special precautions for user

#### DOT

Not applicable

#### TDG

Not applicable

#### IMDG

Not applicable

#### IATA

Not applicable

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

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

### 15.2. International regulations

#### CANADA

##### Tributyl phosphate (126-73-8)

Listed on the Canadian DSL (Domestic Substances List)

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### Dibutyl phenyl phosphate (2528-36-1)

Listed on the Canadian DSL (Domestic Substances List)

### Butyl diphenyl phosphate (2752-95-6)

Listed on the Canadian DSL (Domestic Substances List)

### 2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate (62256-00-2)

Listed on the Canadian DSL (Domestic Substances List)

### 2,6-Di-tert-butyl-p-cresol (128-37-0)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

### Tributyl phosphate (126-73-8)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 2,6-Di-tert-butyl-p-cresol (128-37-0)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### 15.3. US State regulations

Component	State or local regulations
Tributyl phosphate(126-73-8)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Dibutyl phenyl phosphate(2528-36-1)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List
2,6-Di-tert-butyl-p-cresol(128-37-0)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

#### SECTION 16: Other information

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#### Full text of H-phrases

H315	Causes skin irritation
H351	Suspected of causing cancer

#### Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road

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Abbreviations and acronyms	
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.  
NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

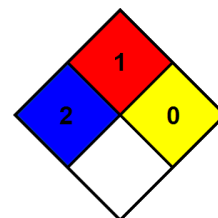
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NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating  
Health : 2 Moderate Hazard - Temporary or minor injury may occur  
: \* - Chronic (long-term) health effects may result from repeated overexposure

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.