

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012. Issue date: 12/31/2021 Revision date: 6/27/2022 Version: 2.0

SECTION 1: Identification	
1.1. Identification	
Product form Product name Product code	 Mixture 71 Fibered Asphalt Roof Coating X71AF
1.2. Recommended use and restrictions of	on use
Use of the substance/mixture	: Architectural Coating
1.3. Supplier	
Manufacturer Karnak Corporation 330 Central Avenue Clark, New Jersey 07066 - USA T +1-800-526-4236 www.karnakcorp.com 1.4. Emergency telephone number Emergency number	: CHEMTREC (US Transportation): (800)424-9300
Emergency number	. CHEMITKEC (05 Transportation). (000)424-9300
SECTION 2: Hazard(s) identification	
2.1. Classification of the substance or mit	xture
GHS US classification	
Flam. Liq. 3 Resp. Sens. 1A Skin Sens. 1 Carc. 2 Repr. 1B Lact. STOT RE 1	Flammable liquid and vapor May cause an allergy or asthma symptoms or breathing difficulties if inhaled May cause an allergic skin reaction Suspected of causing cancer May damage fertility or the unborn child May cause harm to breast-fed children Causes damage to organs through prolonged or repeated exposure
2.2. GHS Label elements, including preca	utionary statements
GHS US labeling	
Hazard pictograms (GHS US)	
Signal word (GHS US) Hazard statements (GHS US)	 Danger Flammable liquid and vapor May cause an allergic skin reaction May cause an allergy or asthma symptoms or breathing difficulties if inhaled Suspected of causing cancer May damage fertility or the unborn child May cause harm to breast-fed children Causes damage to organs through prolonged or repeated exposure
Precautionary statements (GHS US)	 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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Keep container tightly closed.	
Ground/Bond container and receiving equipment.	
Use explosion-proof electrical/ventilating/lighting equipmen	t.
Use only non-sparking tools.	
Take precautionary measures against static discharge.	
Do not breathe dust/fume/gas/mist/vapors/spray.	
Avoid contact during pregnancy/while nursing.	
Wash hands, forearms and face thoroughly after handling.	
Do not eat, drink or smoke when using this product.	
Contaminated work clothing must not be allowed out of the	workplace.
Wear protective gloves/protective clothing/eye protection/fa	ace protection.
Wear respiratory protection.	
If exposed or concerned: Get medical advice/attention.	
If on skin (or hair): Take off immediately all contaminated c	othing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.	
If skin irritation or rash occurs: Get medical advice/attentior	1.
If inhaled: If breathing is difficult, remove person to fresh ai	r and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a poison center	or doctor
Store in a well-ventilated place. Keep cool.	
Store locked up.	
Dispose of contents/container to hazardous or special was	te collection point, in accordance with
local, regional, national and/or international regulation.	

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures % Name **Product identifier** CAS-No.: 8052-42-4 30 - 50 Asphalt < 30 Naphtha, petroleum, hydrotreated heavy CAS-No.: 64742-48-9 Stoddard solvent CAS-No.: 8052-41-3 < 30 Kaolin CAS-No.: 1332-58-7 5 - 10 Microcrystalline cellulose CAS-No.: 9004-34-6 1 - 5 Benzene, 1,2,4-trimethyl-CAS-No.: 95-63-6 < 2 CAS-No.: 111-84-2 < 2 nonane CAS-No.: 1330-20-7 Xylenes (o-, m-, p- isomers) < 1 Fatty aminoamine mixture Trade Secret < 1 Toluene CAS-No.: 108-88-3 < 1 hexane CAS-No.: 110-54-3 < 1

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Name	Product identifier	%
Ethylbenzene	CAS-No.: 100-41-4	< 1
Naphthalene	CAS-No.: 91-20-3	< 1

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

SECTION 4: First-aid measures	
4.1. Description of first aid measures	
First-aid measures general First-aid measures after inhalation	: IF exposed or concerned: Get medical advice/attention. : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If
First-aid measures after skin contact	 experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash clothing before re-using. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	 IF IN EYES: 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	: Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Get medical advice/attention if you feel unwell.
4.2. Most important symptoms and effect	ts (acute and delayed)
Symptoms/effects	: May cause harm to breast-fed children.
Symptoms/effects after inhalation	: May cause irritation to the respiratory tract. May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: May cause skin irritation. Repeated exposure may cause skin dryness or cracking. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/effects after ingestion Chronic symptoms	 May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

4.3. Immediate medical attention and special treatment, if necessary

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures		
5.1. Suitable (and unsuitable) extinguishing media		
Suitable extinguishing media Unsuitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.: Do not use water jet.	
5.2. Specific hazards arising from the chemical		
Fire hazard Explosion hazard	 Flammable liquid and vapor. Products of combustion may include, and are not limited to: oxides of carbon. Hydrocarbons. May form flammable/explosive vapor-air mixture. 	
5.3. Special protective equipment and precautions for fire-fighters		
Firefighting instructions	: Move containers away from the fire area if this can be done without risk. Cool closed containers exposed to fire with water spray.	
Protection during firefighting	: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).	

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SECTION 6: Accidental release measures		
6.1. Personal precautions, protective equipment and emergency procedures		
General measures	 Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Use special care to avoid static electric charges. Remove all sources of ignition. Use only non-sparking tools. 	
6.1.1. For non-emergency personnel		
No additional information available		
6.1.2. For emergency responders		
No additional information available		
6.2. Environmental precautions		
Prevent entry to sewers and public waters.		
6.3. Methods and material for containment and cleaning up		
For containment Methods for cleaning up	 Stop leak if safe to do so. Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment. Sweep or shovel spills into appropriate container for disposal. Provide ventilation. 	
U 1		
6.4. Reference to other sections		
For further information refer to section 8: "Exposure	controls/personal protection".	

SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Additional hazards when processed Precautions for safe handling Hygiene measures	 Handle empty containers with care because residual vapors are flammable. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with eyes, skin and clothing. Do not breathe dust, fume, gas, mist, spray, vapors. Do not swallow. When using do not eat, drink or smoke. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Handle and open container with care. Use only non-sparking tools. Use explosion-proof equipment. Avoid contact during pregnancy/while nursing. Benzene may be present in trace amounts. Benzene is subject to the standard 29 CFR 1910.1028 which may contain specific requirements for handling including protective equipment, regulated areas, monitoring and medical surveillance. The employer should review the standard and assure compliance with applicable requirements. Take off immediately all contaminated clothing and wash it before reuse. Contaminated work
~	clothing should not be allowed out of the workplace. Wash hands, forearms and face thoroughly after handling.
7.2. Conditions for safe storage, including	any incompatibilities
Technical measures Storage conditions	 Proper grounding procedures to avoid static electricity should be followed. Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Store locked up.

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SECTION 8: Exposure controls/personal	protection
8.1. Control parameters	
71 Fibered Asphalt Roof Coating	
No additional information available	
Asphalt (8052-42-4)	
USA - ACGIH - Occupational Exposure Limits	-
ACGIH OEL TWA	0.5 mg/m ³ (fume, inhalable particulate matter)
ACGIH chemical category	Not Classifiable as a Human Carcinogen fume, coal tar-free
USA - ACGIH - Biological Exposure Indices	·
BEI (BLV)	 2.5 μg/l Parameter: 1-Hydroxypyrene with hydrolysis - Medium: urine - Sampling time: end of shift at end of workweek (background) Parameter: 3-Hydroxybenzo(a)pyrene with hydrolysis - Medium: urine - Sampling time: end of shift at end of workweek (nonquantitative)
Naphtha, petroleum, hydrotreated heavy (647	42-48-9)
No additional information available	
Xylenes (o-, m-, p- isomers) (1330-20-7)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	100 ppm
ACGIH OEL STEL [ppm]	150 ppm
ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA - ACGIH - Biological Exposure Indices	
BEI (BLV)	1.5 g/g Kreatinin Parameter: Methylhippuric acids - Medium: urine - Sampling time: end of shift
USA - OSHA - Occupational Exposure Limits	
Local name	Xylenes (o-, m-, p-isomers)
OSHA PEL (TWA) [1]	435 mg/m ³
OSHA PEL (TWA) [2]	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Toluene (108-88-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Toluene
ACGIH OEL TWA [ppm]	20 ppm
Remark (ACGIH)	TLV® Basis: Visual impair; female repro; pregnancy loss. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
ACGIH chemical category	Not Classifiable as a Human Carcinogen
Regulatory reference	ACGIH 2020

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Toluene (108-88-3)	
USA - ACGIH - Biological Exposure Indices	
BEI (BLV)	 0.02 mg/l Parameter: Toluene - Medium: blood - Sampling time: prior to last shift of workweek 0.03 mg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift 0.3 mg/g Kreatinin Parameter: o-Cresol with hydrolysis - Medium: urine - Sampling time: end of shift (background)
USA - OSHA - Occupational Exposure Limits	
Local name	Toluene
OSHA PEL (TWA) [2]	200 ppm
OSHA PEL C [ppm]	300 ppm
Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	500 ppm Peak (10 minutes)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-2
Ethylbenzene (100-41-4)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	20 ppm
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA - ACGIH - Biological Exposure Indices	
BEI (BLV)	0.15 g/g Kreatinin Parameter: Sum of mandelic acid and phenylglyoxylic acid - Medium: urine - Sampling time: end of shift (nonspecific)
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl benzene
OSHA PEL (TWA) [1]	435 mg/m ³
OSHA PEL (TWA) [2]	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1 OSHA Annotated Table Z-1
hexane (110-54-3)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	50 ppm
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA - ACGIH - Biological Exposure Indices	
BEI (BLV)	0.5 mg/l Parameter: 2,5-Hexanedione without hydrolysis - Medium: urine - Sampling time: end of shift
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) [1]	1800 mg/m³
OSHA PEL (TWA) [2]	500 ppm
Stoddard solvent (8052-41-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Stoddard solvent
ACGIH OEL TWA [ppm]	100 ppm

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Regulatory reference ACGIH 2020 USA - OSHA - Occupational Exposure Limits Stoddard solvent OSHA PEL (TWA) [1] 2000 mg/m³ OSHA PEL (TWA) [2] 500 ppm Regulatory reference (US-OSHA) OSHA Annotated Table Z-1 Naphthalene (91-20-3) USA - ACGIH - Occupational Exposure Limits VGCH OEL TWA (ppm) 10 ppm ACGIH OEL TWA (ppm) 10 ppm CACGIH - Biological Exposure Indices Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to overall exposure by the cutaneous route USA - ACGIH - Cocupational Exposure Indices Parameter. 1-Naphthal with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific) USA - Oscupational Exposure Limits Sodrard Scheere Limits OSHA PEL (TWA) [1] 50 mg/m³ OSHA PEL (TWA) [2] 10 ppm nonane (111-84-2) USA - Oscupational Exposure Limits USA - ACGIH - Occupational Exposure Limits Solvent USA - ACGIH - Occupational Exposure Limits Solvent USA - OSCHA - Occupational Exposure Limits Solvent USA - OSCHA - Occupational Exposure Limits Solvent USA - OSCH - Occupa	Stoddard solvent (8052-41-3)		
USA - OSLA - Occupational Exposure Limits Stoddard solvent DSHA PEL (TWA) [1] 2900 mg/m ² OSHA PEL (TWA) [2] S00 ppm Regulatory reference (US-OSHA) OSHA Annotated Table Z-1 Naphthalene (91-20-3) USA - ACGIH - Occupational Exposure Limits ACGIH Occupational Exposure Limits Contribution to overall exposure by the cutaneous route VISA - ACGIH - Biological Exposure Limits Contribution to overall exposure by the cutaneous route VISA - ACGIH - Biological Exposure Limits Parameter. 1-Naphthal with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific) VISA - OSCIH - Occupational Exposure Limits So mg/m ² VISA - OSCIH - Occupational Exposure Limits So mg/m ² VISA - OSCIH - Occupational Exposure Limits So mg/m ² VISA - OSCIH - Occupational Exposure Limits So mg/m ² VISA - OSCIH - Occupational Exposure Limits So mg/m ² VISA - ACGIH - Occupational Exposure Limits VISA - ACGIH - Occupational Exposure Limits VISA - ACGIH - Occupational Exposure Limits VISA - ACGIH - Occupational Exposure Limits VISA - ACGIH - Occupational Exposure Limits VISA - ACGIH - Occupational Exposure Limits VISA - ACGIH - Occupational Exposur	Remark (ACGIH)	TLV® Basis: Eye, skin, & kidney dam; nausea; CNS impair	
Local name Stoddard solvent OSHA PEL (TWA) [1] 2900 mg/m³ OSHA PEL (TWA) [2] 500 ppm Regulatory reference (US-OSHA) OSHA Annotated Table Z-1 Naphthalene (d1-20-3) USA- ACGIH - Occupational Exposure Limits CGIH OE (TWA) [pm] 10 ppm ACGIH - Occupational Exposure Limits Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant controllion to overall exposure by the cutaneous route USA - ACGIH - Biological Exposure Indices E SEI (BLV) Parameter: 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific) USA - OSHA - Occupational Exposure Limits SoBHA PEL (TWA) [2] OSHA PEL (TWA) [2] 10 ppm Nonane (11-84-2) USA - ACGIH - Occupational Exposure Limits VGCH OEC TWA [ppm] 200 ppm Benzene, 1,2,4+trimethyl- (95-63-6) Vector Solution available Witcrocrystalline collulose (9004-34-6) USA - OSHA - Occupational Exposure Limits VGSA - ACGIH - Occupational Exposure Limits Sold Area VGM - Occupational Exposure Limits Sold ppm Benzene, 1,2,4+trimethyl- (95-63-6) Vectorstalline collulose (9004-34-6) VISA - OSHA - Occupational Exposure Limits Sold ppm Sold - Occupational Exposure Limits Soff OEL TWA VISA - OSHA - Occup	Regulatory reference	ACGIH 2020	
DSHA PEL (TWA) [1] 2000 mg/m ² DSHA PEL (TWA) [2] 500 ppm Regulatory reference (US-OSHA) OSHA Annotated Table Z-1 Naphthalence (91-20-3) USHA Annotated Table Z-1 USA - ACGH - Occupational Exposure Limits ACGIM OEL TWA (ppm) ACGIH OEL TWA (ppm) 10 ppm ACGIH - Biological Exposure Indices Ber (BLV) BEI (BLV) Parameter. 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific) DSHA - ACGIH - Occupational Exposure Limits Do pm DSHA PEL (TWA) [1] 50 mg/m ² DSHA PEL (TWA) [2] 10 ppm nonane (111-84-2) 10 ppm DSA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA (ppm) ACGIH OEL TWA (ppm) 20 0 ppm Benzene, 1,2,4-trimethyl- (95-63-6) Volta (String String	USA - OSHA - Occupational Exposure Limits		
SNA PEL (TWA) [2] 500 pm Regulatory reference (US-OSHA) OSHA Annotated Table Z-1 Naphthalene (91-20-3) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA (ppm) 10 ppm ACGIH OEL TWA (ppm) Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to overall exposure by the cutaneous noute USA - ACGIH - Biological Exposure Indices Environmental exposure by the cutaneous noute SEI (BLV) Parameter: 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific) USA - OSHA - Occupational Exposure Limits 50 mg/m ² OSHA PEL (TWA) [2] 10 ppm nonane (111-84-2) USA - ACGIH - Occupational Exposure Limits VGBH OCL TWA [2] 10 ppm Nadditional Information available S00 ppm Benzene, 1,2,4-trimethyl- (95-63-6) No additional Information available Microcrystalline cellulose (9004-34-6) USA - ACGIH - Occupational Exposure Limits ACGIH OCL TWA 10 mg/m ² USA - ACGIH - Occupational Exposure Limits S0 mg/m ² (total dust) 5 mg/m	Local name	Stoddard solvent	
Regulatory reference (US-OSHA) OSHA Annotated Table Z-1 Naphthalene (91-20-3) USA - ACGIH - Occupational Exposure Limits ACGIH OCL TWA [ppn] 10 ppm ACGIH Hemical category Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to verall exposure by the cutaneous route USA - ACGIH - Biological Exposure Indices Parameter: 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shit (nonquantitative, nonspecific) USA - OSHA - Occupational Exposure Limits 50 mg/m² OSHA PEL (TWA) [1] 50 mg/m² DSHA PEL (TWA) [2] 10 ppm nonane (111-84-2) 200 ppm USA - ACGIH - Occupational Exposure Limits 200 ppm ACGIH OGL TWA [ppm] 200 ppm Banzene, 1,2,4-trimethyl- (95-63-6) No additional Information available Microcrystalline collutose (9004-34-6) Usa - ACGIH - Occupational Exposure Limits OSHA - Oscupational Exposure Limits 10 mg/m² USA - ACGIH - Occupational Exposure Limits 200 ppm USA - ACGIH - Occupational Exposure Limits 10 mg/m² OSHA PEL (TWA) [1] 15 mg/m² (total dust) 5 mg/m² (total dust) 5 mg/m² (texplate) fraction) Kaolin (1332-58-7)	OSHA PEL (TWA) [1]	2900 mg/m ³	
Naphthalene (91-20-3) USA - ACOIH - Occupational Exposure Limits ACGIH OEL TWA (ppm) 10 ppm Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to overall exposure by the cutaneous route USA - ACOIH - Biological Exposure Indices BEI (BLV) Parameter: 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific) USA - Occupational Exposure Limits Ob grg/m ³ OSHA PEL (TWA) [1] 50 mg/m ³ DSH A PEL (TWA) [2] 10 ppm nonane (111-64-2) USA - ACOIH - Occupational Exposure Limits ACGIH OEL TWA (ppm) 200 ppm Benzene, 1, 2, 4-trimethyl - (95-63-6) Volume No additional information available Microcrystalline cellulose (9004-34-6) USA - OCCUP atoinal Exposure Limits ACGIH OEL TWA OSHA OEL TWA 10 mg/m ³ USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA USA - ACGIH - Occupational Exposure Limits Sang/m ³ (respirable fraction) KaOIIn (1332-58-7) 15 mg/m ³ (rotal dust) 5 mg/m ³ (respirable fraction) KAOIH - Occupational Exposure Limits Coal name Kaolin	OSHA PEL (TWA) [2]	500 ppm	
USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA (ppm) 10 ppm ACGIH chemical category Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to overall exposure by the cutaneous route USA - ACGIH - Biological Exposure Indices Parameter: 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific) USA - OSCHA - Occupational Exposure Limits Ob mg/m³ DSHA PEL (TWA) [1] 60 mg/m³ DSHA PEL (TWA) [2] 10 ppm nonane (111-64-2) USA - ACGIH - Occupational Exposure Limits DSA - ACGIH - Occupational Exposure Limits 200 ppm Benzene, 1,2,4-trimethyl- (95-63-6) Vector (11-64-2) USA - OSCHA - Occupational Exposure Limits 10 mg/m³ Odd pm 200 ppm Benzene, 1,2,4-trimethyl- (95-63-6) Vector (11-64-2) USA - ACGIH - Occupational Exposure Limits Vector (11-64-2) USA - OSCHA - Occupational Exposure Limits Vector (11-64-2) USA - ACGIH - Occupational Exposure Limits Vector (11-64-2) USA - OSCHA - Occupational Exposure Limits Vector (11-64-2) USA - ACGIH - Occupational Exposure Limits Vector (11-64-2) USA - ACGIH - Occupational Exposure Limits<	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1	
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ACGIH chemical category Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to overall exposure by the cutaneous route USA - ACGIH - Biological Exposure Indices Parameter: 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific) USA - OSHA - Occupational Exposure Limits 50 mg/m ³ OSHA PEL (TWA) [1] 50 mg/m ³ OSHA PEL (TWA) [2] 10 ppm nonane (111-84-2) 200 ppm USA - ACGIH - Occupational Exposure Limits 200 ppm Benzene, 1,2,4-trimethyl- (95-63-6) Voltasting and the state stat	USA - ACGIH - Occupational Exposure Limits		
contribution to overall exposure by the cutaneous route USA - ACGIH - Biological Exposure Indices BEI (BLV) Parameter: 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific) USA - OSCUpational Exposure Limits 50 mg/m³ OSHA PEL (TWA) [1] 50 mg/m³ OSHA FEL (TWA) [2] 10 ppm nonane (111-84-2) 200 ppm USA - ACGIH - Occupational Exposure Limits 200 ppm Benzene, 1,2,4-trimethyl- (95-63-6) No additional information available No additional information available 10 mg/m³ USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA [2] No additional information available 10 mg/m³ USA - ACGIH - Occupational Exposure Limits Starg/m³ (rotal dust) SGHA PEL (TWA) [1] 15 mg/m³ (rotal dust) ST org/m³ (respirable fraction) 5 mg/m³ (respirable fraction) Kaolin (1332-58-7) USA - ACGIH - Occupational Exposure Limits USA - ACGIH - Occupational Exposure Limits 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	ACGIH OEL TWA [ppm]	10 ppm	
BEI (BLV) Parameter: 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific) USA - OSHA - Occupational Exposure Limits 50 mg/m³ OSHA PEL (TWA) [1] 50 mg/m³ DSHA PEL (TWA) [2] 10 ppm nonane (111-84-2) USA - ACGIH - Occupational Exposure Limits ACGIH Occupational Exposure Limits 200 ppm Benzene, 1, 2, 4-trimethyl- (95-63-6) Vo additional information available Wicrocrystalline cellulose (9004-34-6) USA - ACGIH - Occupational Exposure Limits ACGIH Ober TWA 10 mg/m³ USA - Occupational Exposure Limits Vo additional information available Wicrocrystalline cellulose (9004-34-6) USA - ACGIH - Occupational Exposure Limits ACGIH Ober TWA 10 mg/m³ USA - Occupational Exposure Limits SostA - Occupational Exposure Limits OSHA PEL (TWA) [1] 15 mg/m³ (total dust) s mg/m³ (total dust) s mg/m³ (respirable fraction) Kaolin (1332-58-7) USA - ACGIH - Occupational Exposure Limits UsA - ACGIH - Occupational Exposure Limits SostA - ACGIH - Occupational Exposure Limits Local name Kaolin 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	ACGIH chemical category		
shift (nonquantitative, nonspecific) USA - Oscupational Exposure Limits OSHA PEL (TWA) [1] 50 mg/m³ OSHA PEL (TWA) [2] 10 ppm nonane (111-84-2) USA - ACGIH - Occupational Exposure Limits ACGIH Occupational Exposure Limits 200 ppm Benzene, 1,2,4-trimethyl- (95-63-6) 200 ppm No additional information available USA - ACGIH - Occupational Exposure Limits ACGIH Occupational Exposure Limits 10 mg/m³ ACGIH Occupational Exposure Limits 200 pm ACGIH Occupational Exposure Limits 10 mg/m³ ACGIH Occupational Exposure Limits 200 pm ACGIH Occupational Exposure Limits 200 pm ACGIH Occupational Exposure Limits 200 pm SA - ACGIH - Occupational Exposure Limits 200 pm ACGIH Occupational Exposure Limits 200 pm SA - ACGIH - Occupational Exposure Limits 200 pm OSHA - PEL (TWA) [1] 15 mg/m³ (total dust) 5 mg/m	USA - ACGIH - Biological Exposure Indices		
DSHA PEL (TWA) [1] 50 mg/m ³ DSHA PEL (TWA) [2] 10 ppm nonane (11-84-2) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA [ppm] 200 ppm Benzene, 1,2,4-trimethyl- (95-63-6) No additional information available Microcrystalline cellulose (9004-34-6) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 10 mg/m ³ USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 10 mg/m ³ USA - Occupational Exposure Limits OSHA PEL (TWA) [1] 15 mg/m ³ (total dust) 5 mg/m ³ (total dust) OSHA PEL (TWA) [1] 15 mg/m ³ (total dust) 5 mg/m ³ (total dust) SoSHA PEL (TWA) [1] 12 mg/m ³ (total dust) 5 mg/m ³ (total dust) Colin (132-58-7) USA - ACGIH - Occupational Exposure Limits Local name Kaolin ACGIH OEL TWA 2 mg/m ³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	BEI (BLV)		
OSHA PEL (TWA) [2] 10 ppm nonane (111-84-2) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA [ppm] 200 ppm Benzene, 1,2,4-trimethyl- (95-63-6) No additional information available Microcrystalline cellulose (9004-34-6) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 10 mg/m³ USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 10 mg/m³ USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 10 mg/m³ USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 10 mg/m³ USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 15 mg/m³ (total dust) 5 mg/m³ (total dust) 5 mg/m³ (total dust) 5 mg/m³ (total dust) Star A ACGIH - Occupational Exposure Limits USA - ACGIH - Occupational Exposure Limits Local name Kaolin ACGIH OEL TWA 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	USA - OSHA - Occupational Exposure Limits		
Nonane (111-84-2) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA [ppm] 200 ppm Benzene, 1,2,4-trimethyl- (95-63-6) No additional information available Microcrystalline cellulose (9004-34-6) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 10 mg/m³ USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 10 mg/m³ (total dust) 5 mg/m³ (respirable fraction) Kaolin (1332-58-7) USA - ACGIH - Occupational Exposure Limits Local name Kaolin ACGIH OEL TWA 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	OSHA PEL (TWA) [1]	50 mg/m³	
USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA [ppm] 200 ppm Benzene, 1,2,4-trimethyl- (95-63-6)	OSHA PEL (TWA) [2]	10 ppm	
ACGIH OEL TWA [ppm] 200 ppm Benzene, 1,2,4-trimethyl- (95-63-6)	nonane (111-84-2)		
Benzene, 1,2,4-trimethyl- (95-63-6) No additional information available Microcrystalline cellulose (9004-34-6) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 10 mg/m³ USA - OSHA - Occupational Exposure Limits DSHA PEL (TWA) [1] 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction) Kaolin (1332-58-7) USA - ACGIH - Occupational Exposure Limits Local name Kaolin ACGIH OEL TWA 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter) Remark (ACGIH) TLV® Basis: Pneumoconiosis. Notations: A4 (Not classifiable as a Human Carcinogen) ACGIH chemical category Not Classifiable as a Human Carcinogen	USA - ACGIH - Occupational Exposure Limits		
No additional information available Microcrystalline cellulose (9004-34-6) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 10 mg/m³ USA - OSHA - Occupational Exposure Limits OSHA PEL (TWA) [1] 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction) Kaolin (1332-58-7) USA - ACGIH - Occupational Exposure Limits Local name Kaolin ACGIH OEL TWA 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	ACGIH OEL TWA [ppm]	200 ppm	
Microcrystalline cellulose (9004-34-6) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 10 mg/m³ USA - OSHA - Occupational Exposure Limits OSHA - Osha - Occupational Exposure Limits DSHA PEL (TWA) [1] 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction) Kaolin (1332-58-7) USA - ACGIH - Occupational Exposure Limits Local name Kaolin ACGIH OEL TWA 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	Benzene, 1,2,4-trimethyl- (95-63-6)		
USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 10 mg/m³ USA - OSHA - Occupational Exposure Limits OSHA PEL (TWA) [1] 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction) Kaolin (1332-58-7) USA - ACGIH - Occupational Exposure Limits Local name Kaolin ACGIH OEL TWA 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	No additional information available		
ACGIH OEL TWA 10 mg/m³ USA - OSHA - Occupational Exposure Limits OSHA PEL (TWA) [1] 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction) Kaolin (1332-58-7) USA - ACGIH - Occupational Exposure Limits Local name Kaolin ACGIH OEL TWA 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	Microcrystalline cellulose (9004-34-6)		
USA - OSHA - Occupational Exposure Limits OSHA PEL (TWA) [1] 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction) Kaolin (1332-58-7) USA - ACGIH - Occupational Exposure Limits Local name Kaolin ACGIH OEL TWA 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter) Remark (ACGIH) TLV® Basis: Pneumoconiosis. Notations: A4 (Not classifiable as a Human Carcinogen) ACGIH chemical category Not Classifiable as a Human Carcinogen	USA - ACGIH - Occupational Exposure Limits		
OSHA PEL (TWA) [1] 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction) Kaolin (1332-58-7)	ACGIH OEL TWA	10 mg/m ³	
5 mg/m³ (respirable fraction) Kaolin (1332-58-7) USA - ACGIH - Occupational Exposure Limits Local name Kaolin ACGIH OEL TWA 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	USA - OSHA - Occupational Exposure Limits		
USA - ACGIH - Occupational Exposure Limits Local name Kaolin ACGIH OEL TWA 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	OSHA PEL (TWA) [1]		
Local name Kaolin ACGIH OEL TWA 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	Kaolin (1332-58-7)		
ACGIH OEL TWA 2 mg/m³ (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	USA - ACGIH - Occupational Exposure Limits		
particulate matter) Remark (ACGIH) ACGIH chemical category Not Classifiable as a Human Carcinogen	Local name	Kaolin	
ACGIH chemical category Not Classifiable as a Human Carcinogen	ACGIH OEL TWA		
	Remark (ACGIH)	TLV® Basis: Pneumoconiosis. Notations: A4 (Not classifiable as a Human Carcinogen)	
Regulatory reference ACGIH 2020	ACGIH chemical category	Not Classifiable as a Human Carcinogen	
	Regulatory reference	ACGIH 2020	

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Kaolin (1332-58-7)		
USA - OSHA - Occupational Exposure Limits		
OSHA PEL (TWA) [1]	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)	
8.2. Appropriate engineering controls		
	Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits. Provide readily accessible eye wash stations and safety showers. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Avoid release to the environment.	
8.3. Individual protection measures/Personal	protective equipment	
Hand protection:		
Wear suitable gloves resistant to chemical penetration		
Eye protection:		
Safety glasses or goggles are recommended when using product.		
Skin and body protection:		
Wear suitable protective clothing		
Respiratory protection:		
Wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.		

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: No data available
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 300 – 350 °F
Flash point	: 104 °F
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Flammable liquid and vapor.
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	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: > 20.5 mm²/s
Viscosity, dynamic	: No data available
Explosion limits	: No data available

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Explosive properties Oxidizing properties	: No data available : No data available	
9.2. Other information		

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Freezing. Sources of ignition. Direct sunlight. Incompatible materials.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. Hydrocarbons. May release flammable gases.

SECTION 11: Toxicological information		
11.1. Information on toxicological effects		
Acute toxicity (dermal)	Not classified Not classified Not classified	
Asphalt (8052-42-4)		
LD50 oral rat	> 5000 mg/kg	
LD50 dermal rabbit	> 2000 mg/kg	
LC50 inhalation rat	> 94.4 mg/m³ (Exposure time: 4.5 h)	
Naphtha, petroleum, hydrotreated heavy (64742-48-9)		
LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)	
LD50 dermal rabbit	> 5000 mg/kg	
LC50 inhalation rat	> 8500 mg/m³ (Exposure time: 4 h)	
Xylenes (o-, m-, p- isomers) (1330-20-7)		
LD50 oral rat	3500 mg/kg	
LD50 dermal rat	1100 mg/kg	

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Toluene (108-88-3)		
LD50 oral rat	2600 mg/kg	
LD50 dermal rabbit	12000 mg/kg	
LC50 inhalation rat	12.5 mg/l/4h	
Ethylbenzene (100-41-4)		
LD50 oral rat	3500 mg/kg	
LD50 dermal rabbit	15400 mg/kg	
LC50 inhalation rat	17.4 mg/l/4h	
hexane (110-54-3)		
LD50 oral rat	25 g/kg	
LD50 dermal rabbit	3000 mg/kg	
LC50 inhalation rat	48000 ppm/4h	
Stoddard solvent (8052-41-3)		
LD50 dermal rabbit	> 3000 mg/kg	
LC50 inhalation rat	> 5.5 mg/l/4h	
Naphthalene (91-20-3)		
LD50 oral rat	1110 mg/kg	
LD50 dermal rabbit	1120 mg/kg	
LC50 inhalation rat	> 0.4 mg/l/4h	
nonane (111-84-2)		
LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity)	
LD50 dermal rabbit	> 2000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity)	
LC50 inhalation rat	17 mg/l air Animal: rat, Animal sex: male, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), 95% CL: 14 - 21	
LC50 inhalation rat	3200 ppm/4h	
Benzene, 1,2,4-trimethyl- (95-63-6)		
LD50 oral rat	3280 mg/kg	
LD50 dermal rabbit	> 3160 mg/kg	
LC50 inhalation rat	18 g/m³ (Exposure time: 4 h)	
Microcrystalline cellulose (9004-34-6)		
LD50 oral rat	> 5 g/kg	
LD50 dermal rabbit	> 2000 mg/kg	
LC50 inhalation rat	> 5800 mg/m³ (Exposure time: 4 h)	
Kaolin (1332-58-7)		
LD50 oral rat	> 5000 mg/kg	
LD50 dermal rat	> 5000 mg/kg	

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Serious eye damage/irritation : Respiratory or skin sensitization : Germ cell mutagenicity : Carcinogenicity :	Not classified Not classified May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Not classified Suspected of causing cancer.
Asphalt (8052-42-4)	
IARC group	2B - Possibly carcinogenic to humans
In OSHA Hazard Communication Carcinogen list	Yes
Xylenes (o-, m-, p- isomers) (1330-20-7)	
IARC group	3 - Not classifiable
Toluene (108-88-3)	
IARC group	3 - Not classifiable
Ethylbenzene (100-41-4)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Evidence of Carcinogenicity
In OSHA Hazard Communication Carcinogen list	Yes
Naphthalene (91-20-3)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen, Evidence of Carcinogenicity
In OSHA Hazard Communication Carcinogen list	Yes
Reproductive toxicity :	May damage fertility or the unborn child. May cause harm to breast-fed children.
Naphthalene (91-20-3)	
LOAEL (animal/female, F0/P)	50 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:OECD Guideline 414 (Prenatal Developmental Toxicity Study)
LOAEL (animal/female, F1)	450 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:OECD Guideline 414 (Prenatal Developmental Toxicity Study)
NOAEL (animal/female, F0/P)	120 mg/kg body weight Animal: rabbit, Animal sex: female, Guideline: other:OECD Guideline 414 (Prenatal Developmental Toxicity Study)
STOT-single exposure :	Not classified
Xylenes (o-, m-, p- isomers) (1330-20-7)	
STOT-single exposure	May cause drowsiness or dizziness.
Toluene (108-88-3)	
STOT-single exposure	May cause drowsiness or dizziness.
hexane (110-54-3)	
STOT-single exposure	May cause drowsiness or dizziness.
nonane (111-84-2)	
STOT-single exposure	May cause drowsiness or dizziness.
Benzene, 1,2,4-trimethyl- (95-63-6)	
STOT-single exposure	May cause respiratory irritation.

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STOT-repeated exposure	: Causes damage to organs through prolonged or repeated exposure.
Asphalt (8052-42-4)	
LOAEC (inhalation,rat,dust/mist/fume,90 days)	0.0207 mg/l air Animal: rat, Guideline: other:OECD 451
Xylenes (o-, m-, p- isomers) (1330-20-7)	
LOAEL (oral,rat,90 days)	150 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EPA OPP 82-1 (90-Day Oral Toxicity)
Toluene (108-88-3)	
LOAEL (oral,rat,90 days)	1250 mg/kg body weight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral,rat,90 days)	625 mg/kg body weight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation,rat,vapor,90 days)	2.355 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Ethylbenzene (100-41-4)	
NOAEL (oral,rat,90 days)	75 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
hexane (110-54-3)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Stoddard solvent (8052-41-3)	
STOT-repeated exposure	Causes damage to organs (central nervous system) through prolonged or repeated exposure.
Naphthalene (91-20-3)	
LOAEL (oral,rat,90 days)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
LOAEC (inhalation,rat,vapor,90 days)	0.011 mg/l air Animal: rat, Guideline: EPA OPP 82-4 (90-Day Inhalation Toxicity), Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
NOAEL (dermal,rat/rabbit,90 days)	1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
nonane (111-84-2)	
NOAEL (oral,rat,90 days)	100 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEC (inhalation,rat,vapor,90 days)	24.3 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90- Day Study)
NOAEL (subchronic,oral,animal/male,90 days)	100 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Benzene, 1,2,4-trimethyl- (95-63-6)	
NOAEL (oral,rat,90 days)	600 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

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Benzene, 1,2,4-trimethyl- (95-63-6)	
NOAEC (inhalation,rat,vapor,90 days)	1.8 mg/l air Animal: rat, Guideline: OECD Guideline 452 (Chronic Toxicity Studies)
Aspiration hazard	: Not classified
Viscosity, kinematic	: > 20.5 mm²/s
Symptoms/effects	: May cause harm to breast-fed children.
Symptoms/effects after inhalation	 May cause irritation to the respiratory tract. May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: May cause skin irritation. Repeated exposure may cause skin dryness or cracking. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhe
Chronic symptoms	: Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general :	May cause long-term adverse effects in the aquatic environment.
Naphtha, petroleum, hydrotreated heavy (64742-48-9)	
LC50 - Fish [1]	2200 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
Xylenes (o-, m-, p- isomers) (1330-20-7)	
LC50 - Fish [1]	2.6 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 3.4 mg/l Test organisms (species): Ceriodaphnia dubia
LC50 - Fish [2]	2.661 – 4.093 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 - Crustacea [2]	0.6 mg/l (Exposure time: 48 h - Species: Gammarus lacustris)
LOEC (chronic)	3.16 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	> 1.3 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '56 d'
Toluene (108-88-3)	
LC50 - Fish [1]	5.5 mg/l Test organisms (species): Oncorhynchus kisutch
EC50 - Crustacea [1]	5.46 – 9.83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 - Fish [2]	12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [2]	11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LOEC (chronic)	2.76 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC (chronic)	0.74 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC chronic fish	1.39 mg/l Test organisms (species): Oncorhynchus kisutch Duration: '40 d'
NOEC chronic crustacea	0.74 mg/l
Ethylbenzene (100-41-4)	
LC50 - Fish [1]	5.1 mg/l Test organisms (species): Menidia menidia
EC50 - Crustacea [1]	1.8 – 2.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)

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Ethylbenzene (100-41-4)			
LC50 - Fish [2]	4.2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static])		
LOEC (chronic)	1.7 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'		
NOEC (chronic)	0.96 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'		
NOEC chronic crustacea	0.956 mg/l		
hexane (110-54-3)			
LC50 - Fish [1]	2.1 – 2.98 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])		
Naphthalene (91-20-3)	Naphthalene (91-20-3)		
LC50 - Fish [1]	5.74 – 6.44 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])		
EC50 - Crustacea [1]	2.16 mg/l (Exposure time: 48 h - Species: Daphnia magna)		
LC50 - Fish [2]	1.6 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])		
EC50 - Crustacea [2]	1.96 mg/l (Exposure time: 48 h - Species: Daphnia magna [Flow through])		
NOEC (chronic)	0.59 mg/l Test organisms (species): Daphnia pulex Duration: '125 d'		
NOEC chronic fish	≈ 0.37 mg/l Test organisms (species): Oncorhynchus kisutch Duration: '40 d'		
nonane (111-84-2)			
EC50 - Crustacea [1]	0.2 mg/l Test organisms (species): Daphnia magna		
LOEC (chronic)	0.32 mg/l Test organisms (species): Daphnia magna Duration: '21 d'		
NOEC (chronic)	0.17 mg/l Test organisms (species): Daphnia magna Duration: '21 d'		
Benzene, 1,2,4-trimethyl- (95-63-6)			
LC50 - Fish [1]	7.19 – 8.28 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])		
EC50 - Crustacea [1]	6.14 mg/l (Exposure time: 48 h - Species: Daphnia magna)		
12.2. Persistence and degradability			
71 Fibered Asphalt Roof Coating			
Persistence and degradability	Not established.		
12.3. Bioaccumulative potential			
71 Fibered Asphalt Roof Coating			
Bioaccumulative potential	Not established.		
Asphalt (8052-42-4)			
BCF - Fish [1]	(no bioaccumulation expected)		
Partition coefficient n-octanol/water	> 6		
Xylenes (o-, m-, p- isomers) (1330-20-7)			
BCF - Fish [1]	0.6 – 15		
Partition coefficient n-octanol/water	2.77 – 3.15		
Toluene (108-88-3)			

Partition coefficient n-octanol/water

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Ethylbenzene (100-41-4)	
BCF - Fish [1]	15
Partition coefficient n-octanol/water	3.2
Naphthalene (91-20-3)	
BCF - Fish [1]	30 - 430
Partition coefficient n-octanol/water	3.6
Benzene, 1,2,4-trimethyl- (95-63-6)	
Partition coefficient n-octanol/water	3.63
12.4. Mobility in soil	

No additional information available

12.5. Other adverse effects

Other information

: No other effects known.

SECTION 13: Disposal considerations	5
13.1. Disposal methods	
Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. The generation of waste should be avoided or minimized wherever possible. Recycle empty containers where allowed. Empty containers may contain residues which are hazardous.
Additional information	: Handle empty containers with care because residual vapors are flammable.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number		
DOT NA No	: Not regulated (if shipped in NON BULK packaging by ground transport) per DOT Exemption 173.150(1)(f)	
UN-No. (TDG)	: Not regulated (if shipped in NON BULK packaging by ground transport) per TDG Exemption 1.33	
UN-No. (IMDG)	: 1999	
UN-No. (IATA)	: 1999	
14.2. UN proper shipping name		
Proper Shipping Name (DOT)	: Not regulated (if shipped in NON BULK packaging by ground transport) per DOT Exemption 173.150(1)(f)	
Proper Shipping Name (TDG)	: Not regulated (if shipped in NON BULK packaging by ground transport) per TDG Exemption 1.33	
Proper Shipping Name (IMDG)	: TARS, LIQUID	
Proper Shipping Name (IATA)	: TARS, LIQUID	
*Flammable for Air and Vessel transportation to non-US territories.		
14.3. Transport hazard class(es)		
DOT		
Transport hazard class(es) (DOT)	: Not regulated	
Hazard labels (DOT)	: Not regulated	

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TDG Transport hazard class(es) (TDG) Hazard labels (TDG)	: Not regulated : Not regulated
IMDG Transport hazard class(es) (IMDG) Hazard labels (IMDG)	: 3 : 3
IATA Transport hazard class(es) (IATA) Hazard labels (IATA)	
14.4. Packing group	
Packing group (DOT) Packing group (TDG) Packing group (IMDG) Packing group (IATA)	 Not regulated Not regulated III III
14.5. Environmental hazards	
Other information	: No supplementary information available.
14.6. Special precautions for user	
Special transport precautions Marine pollutant Emergency Response Guidebook No.	 Do not handle until all safety precautions have been read and understood. Product is not a marine pollutant 130

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

Transport per UN1999 TARS LIQUID 3, PG III

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

15.2. International regulations

No additional information available

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

15.3. US State regulations

🗥 WARNING:

This product can expose you to Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

according to the Hazard Communication Standard (CF	-R29 1910.1200) HazCom 2012.	
Issue date	: 12/31/2021	
Revision date	: 6/27/2022	
Other information	: None.	
Prepared by	: Nexreg Compliance Inc.	NEXREG
	www.Nexreg.com	ONEXREG

Inc	dication of changes:
Tra	ansport information. GHS classification.

Safety Data Sheet (SDS), USA

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