Conforms to US OSHA Hazard Communication 29CFR1910.1200

SAFETY DATA SHEET

Agilent Technologies

EN12916:2006 IP391-07 Cal. Solns A-D, Part Number 5190-0484

Section 1. Identification

1.1 Product identifier

Product name : EN12916:2006 IP391-07 Cal. Solns A-D, Part Number 5190-0484

Part no. (chemical kit) : 5190-0484

Part no. :

EN12916:2006 IP391-07 Cal. Soln A	5190-0484-A
EN12916:2006 IP391-07 Cal. Soln B	5190-0484-B
EN12916:2006 IP391-07 Cal. Soln C	5190-0484-C
EN12916:2006 IP391-07 Cal. Soln D	5190-0484-D

Validation date : 4/28/2023

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use

EN12916:2006 IP391-07 Cal. Soln A	1 x 1 ml
EN12916:2006 IP391-07 Cal. Soln B	1 x 1 ml
EN12916:2006 IP391-07 Cal. Soln C	1 x 1 ml
EN12916:2006 IP391-07 Cal. Soln D	1 x 1 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status :

EN12916:2006 IP391-07 Cal. Soln A	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
EN12916:2006 IP391-07 Cal. Soln B	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
EN12916:2006 IP391-07 Cal. Soln C	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
EN12916:2006 IP391-07 Cal. Soln D	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

EN12916:2006 IP391-07 Cal. Soln A

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN IRRITATION - Category 2
H319	EYE IRRITATION - Category 2A
H361	TOXIC TO REPRODUCTION - Category 2
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H304	ASPIRATION HAZARD - Category 1
H400	AQUATIC HAZARD (ACUTE) - Category 1
H410	AQUATIC HAZARD (LONG-TERM) - Category 1

Section 2. Hazards identification

EN12916:2006 IP391-07 Cal. Soln B

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN IRRITATION - Category 2
H319	EYE IRRITATION - Category 2A
H361	TOXIC TO REPRODUCTION - Category 2
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H304	ASPIRATION HAZARD - Category 1
H400	AQUATIC HAZARD (ACUTE) - Category 1
H410	AQUATIC HAZARD (LONG-TERM) - Category 1

EN12916:2006 IP391-07 Cal. Soln C

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN IRRITATION - Category 2
H319	EYE IRRITATION - Category 2A
H361	TOXIC TO REPRODUCTION - Category 2
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H304	ASPIRATION HAZARD - Category 1
H400	AQUATIC HAZARD (ACUTE) - Category 1
H410	AQUATIC HAZARD (LONG-TERM) - Category 1

EN12916:2006 IP391-07 Cal. Soln D

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN IRRITATION - Category 2
H319	EYE IRRITATION - Category 2A
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H304	ASPIRATION HAZARD - Category 1
H400	AQUATIC HAZARD (ACUTE) - Category 1
H410	AQUATIC HAZARD (LONG-TERM) - Category 1

2.2 GHS label elements

Section 2. Hazards identification

Hazard pictograms :

EN12916:2006 IP391-07 Cal. Soln A

EN12916:2006 IP391-07 Cal. Soln B

EN12916:2006 IP391-07 Cal. Soln C

EN12916:2006 IP391-07 Cal. Soln D

Signal word :

EN12916:2006 IP391-07 Cal. Soln A	Danger
EN12916:2006 IP391-07 Cal. Soln B	Danger
EN12916:2006 IP391-07 Cal. Soln C	Danger
EN12916:2006 IP391-07 Cal. Soln D	Danger

Hazard statements :

EN12916:2006 IP391-07 Cal. Soln A

H225 - Highly flammable liquid and vapor.

H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H361 - Suspected of damaging fertility or the unborn child.
H410 - Very toxic to aquatic life with long lasting effects.

EN12916:2006 IP391-07 Cal. Soln B

H225 - Highly flammable liquid and vapor.

H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H361 - Suspected of damaging fertility or the unborn child.
H410 - Very toxic to aquatic life with long lasting effects.

EN12916:2006 IP391-07 Cal. Soln C

H225 - Highly flammable liquid and vapor.

H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.

Section 2. Hazards identification

			H361 - Suspected of damaging fertility or the unborn child. H410 - Very toxic to aquatic life with long lasting effects.
		EN12916:2006 IP391-07 Cal. Soln D	H225 - Highly flammable liquid and vapor. H304 - May be fatal if swallowed and enters airways. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. H336 - May cause drowsiness or dizziness. H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention	:	EN12916:2006 IP391-07 Cal. Soln A	P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P273 - Avoid release to the environment. P261 - Avoid breathing vapor. P264 - Wash thoroughly after handling.
		EN12916:2006 IP391-07 Cal. Soln B	P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P273 - Avoid release to the environment. P261 - Avoid breathing vapor. P264 - Wash thoroughly after handling.
		EN12916:2006 IP391-07 Cal. Soln C	P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P273 - Avoid release to the environment. P261 - Avoid breathing vapor. P264 - Wash thoroughly after handling.
		EN12916:2006 IP391-07 Cal. Soln D	P280 - Wear protective gloves. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks,

Section 2. Hazards identification

			open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P273 - Avoid release to the environment. P261 - Avoid breathing vapor. P264 - Wash thoroughly after handling.
Response	:	EN12916:2006 IP391-07 Cal. Soln A	P391 - Collect spillage. P308 + P313 - IF exposed or concerned: Get medical advice or attention. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
		EN12916:2006 IP391-07 Cal. Soln B	P391 - Collect spillage. P308 + P313 - IF exposed or concerned: Get medical advice or attention. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
		EN12916:2006 IP391-07 Cal. Soln C	P391 - Collect spillage. P308 + P313 - IF exposed or concerned: Get medical advice or attention. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water.

Section 2. Hazards identification

		EN12916:2006 IP391-07 Cal. Soln D	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. P391 - Collect spillage. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Storage	:	EN12916:2006 IP391-07 Cal. Soln A	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
		EN12916:2006 IP391-07 Cal. Soln B	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
		EN12916:2006 IP391-07 Cal. Soln C	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
		EN12916:2006 IP391-07 Cal. Soln D	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
Disposal	:	EN12916:2006 IP391-07 Cal. Soln A	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		EN12916:2006 IP391-07 Cal. Soln B	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		EN12916:2006 IP391-07 Cal. Soln C	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		EN12916:2006 IP391-07 Cal. Soln D	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	:	EN12916:2006 IP391-07 Cal. Soln A	None known.
		EN12916:2006 IP391-07 Cal. Soln B	None known.
		EN12916:2006 IP391-07 Cal. Soln C	None known.
		EN12916:2006 IP391-07 Cal. Soln D	None known.

2.3 Other hazards

Section 2. Hazards identification

Hazards not otherwise classified : EN12916:2006 IP391-07 Cal. Soln A None known.
EN12916:2006 IP391-07 Cal. Soln B None known.
EN12916:2006 IP391-07 Cal. Soln C None known.
EN12916:2006 IP391-07 Cal. Soln D None known.

Section 3. Composition/information on ingredients

Substance/mixture : EN12916:2006 IP391-07 Cal. Soln A Mixture
EN12916:2006 IP391-07 Cal. Soln B Mixture
EN12916:2006 IP391-07 Cal. Soln C Mixture
EN12916:2006 IP391-07 Cal. Soln D Mixture

Ingredient name	%	CAS number
EN12916:2006 IP391-07 Cal. Soln A		
Heptane	≥90	142-82-5
o-xylene	≤10	95-47-6
Fluorene	≤3	86-73-7
Phenanthrene	<1	85-01-8
EN12916:2006 IP391-07 Cal. Soln B		
Heptane	≥90	142-82-5
o-xylene	≤3	95-47-6
Fluorene	≤3	86-73-7
Phenanthrene	≤0.3	85-01-8
EN12916:2006 IP391-07 Cal. Soln C		
Heptane	≥90	142-82-5
o-xylene	<1	95-47-6
Fluorene	<1	86-73-7
Phenanthrene	≤0.1	85-01-8
EN12916:2006 IP391-07 Cal. Soln D		
Heptane	≥90	142-82-5
Phenanthrene	≤0.1	85-01-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	:	EN12916:2006 IP391-07 Cal. Soln A	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
		EN12916:2006 IP391-07 Cal. Soln B	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
		EN12916:2006 IP391-07 Cal. Soln C	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
		EN12916:2006 IP391-07 Cal. Soln D	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Inhalation	:	EN12916:2006 IP391-07 Cal. Soln A	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		EN12916:2006 IP391-07 Cal. Soln B	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		EN12916:2006 IP391-07 Cal. Soln C	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the

Section 4. First aid measures

			person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		EN12916:2006 IP391-07 Cal. Soln D	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	:	EN12916:2006 IP391-07 Cal. Soln A	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		EN12916:2006 IP391-07 Cal. Soln B	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		EN12916:2006 IP391-07 Cal. Soln C	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		EN12916:2006 IP391-07 Cal. Soln D	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	:	EN12916:2006 IP391-07 Cal. Soln A	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		EN12916:2006 IP391-07 Cal. Soln B	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been

Section 4. First aid measures

	swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
EN12916:2006 IP391-07 Cal. Soln C	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
EN12916:2006 IP391-07 Cal. Soln D	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	EN12916:2006 IP391-07 Cal. Soln A	Causes serious eye irritation.
		EN12916:2006 IP391-07 Cal. Soln B	Causes serious eye irritation.
		EN12916:2006 IP391-07 Cal. Soln C	Causes serious eye irritation.
		EN12916:2006 IP391-07 Cal. Soln D	Causes serious eye irritation.

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Inhalation :

EN12916:2006 IP391-07 Cal. Soln A: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

EN12916:2006 IP391-07 Cal. Soln B: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

EN12916:2006 IP391-07 Cal. Soln C: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

EN12916:2006 IP391-07 Cal. Soln D: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact :

EN12916:2006 IP391-07 Cal. Soln A: Causes skin irritation.

EN12916:2006 IP391-07 Cal. Soln B: Causes skin irritation.

EN12916:2006 IP391-07 Cal. Soln C: Causes skin irritation.

EN12916:2006 IP391-07 Cal. Soln D: Causes skin irritation.

Ingestion :

EN12916:2006 IP391-07 Cal. Soln A: Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

EN12916:2006 IP391-07 Cal. Soln B: Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

EN12916:2006 IP391-07 Cal. Soln C: Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

EN12916:2006 IP391-07 Cal. Soln D: Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact :

EN12916:2006 IP391-07 Cal. Soln A: Adverse symptoms may include the following:

pain or irritation
watering
redness

EN12916:2006 IP391-07 Cal. Soln B: Adverse symptoms may include the following:

pain or irritation
watering
redness

EN12916:2006 IP391-07 Cal. Soln C: Adverse symptoms may include the following:

pain or irritation
watering
redness

EN12916:2006 IP391-07 Cal. Soln D: Adverse symptoms may include the following:

pain or irritation
watering
redness

Section 4. First aid measures

Inhalation :

EN12916:2006 IP391-07 Cal. Soln A

Adverse symptoms may include the following:

respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

EN12916:2006 IP391-07 Cal. Soln B

Adverse symptoms may include the following:

respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

EN12916:2006 IP391-07 Cal. Soln C

Adverse symptoms may include the following:

respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

EN12916:2006 IP391-07 Cal. Soln D

Adverse symptoms may include the following:

respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact :

EN12916:2006 IP391-07 Cal. Soln A

Adverse symptoms may include the following:

irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

EN12916:2006 IP391-07 Cal. Soln B

Adverse symptoms may include the following:

irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

		EN12916:2006 IP391-07 Cal. Soln C	Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations
		EN12916:2006 IP391-07 Cal. Soln D	Adverse symptoms may include the following: irritation redness
Ingestion	:	EN12916:2006 IP391-07 Cal. Soln A	Adverse symptoms may include the following: nausea or vomiting reduced fetal weight increase in fetal deaths skeletal malformations
		EN12916:2006 IP391-07 Cal. Soln B	Adverse symptoms may include the following: nausea or vomiting reduced fetal weight increase in fetal deaths skeletal malformations
		EN12916:2006 IP391-07 Cal. Soln C	Adverse symptoms may include the following: nausea or vomiting reduced fetal weight increase in fetal deaths skeletal malformations
		EN12916:2006 IP391-07 Cal. Soln D	Adverse symptoms may include the following: nausea or vomiting

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	:	EN12916:2006 IP391-07 Cal. Soln A	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		EN12916:2006 IP391-07 Cal. Soln B	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		EN12916:2006 IP391-07 Cal. Soln C	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		EN12916:2006 IP391-07 Cal. Soln D	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	EN12916:2006 IP391-07 Cal. Soln A	No specific treatment.
		EN12916:2006 IP391-07 Cal. Soln B	No specific treatment.
		EN12916:2006 IP391-07 Cal. Soln C	No specific treatment.
		EN12916:2006 IP391-07 Cal. Soln D	No specific treatment.

Section 4. First aid measures

Protection of first-aiders	:	EN12916:2006 IP391-07 Cal. Soln A	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
		EN12916:2006 IP391-07 Cal. Soln B	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
		EN12916:2006 IP391-07 Cal. Soln C	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
		EN12916:2006 IP391-07 Cal. Soln D	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	EN12916:2006 IP391-07 Cal. Soln A	Use dry chemical, CO_2, water spray (fog) or foam.
		EN12916:2006 IP391-07 Cal. Soln B	Use dry chemical, CO_2, water spray (fog) or foam.
		EN12916:2006 IP391-07 Cal. Soln C	Use dry chemical, CO_2, water spray (fog) or foam.
		EN12916:2006 IP391-07 Cal. Soln D	Use dry chemical, CO_2, water spray (fog) or foam.
Unsuitable extinguishing media	:	EN12916:2006 IP391-07 Cal. Soln A	Do not use water jet.
		EN12916:2006 IP391-07 Cal. Soln B	Do not use water jet.
		EN12916:2006 IP391-07 Cal. Soln C	Do not use water jet.
		EN12916:2006 IP391-07 Cal. Soln D	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	:	EN12916:2006 IP391-07 Cal. Soln A	Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented

Section 5. Fire-fighting measures

		from being discharged to any waterway, sewer or drain.
	EN12916:2006 IP391-07 Cal. Soln B	Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	EN12916:2006 IP391-07 Cal. Soln C	Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	EN12916:2006 IP391-07 Cal. Soln D	Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products :	EN12916:2006 IP391-07 Cal. Soln A	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	EN12916:2006 IP391-07 Cal. Soln B	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	EN12916:2006 IP391-07 Cal. Soln C	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	EN12916:2006 IP391-07 Cal. Soln D	Decomposition products may include the following materials: carbon dioxide carbon monoxide

5.3 Advice for firefighters

Section 5. Fire-fighting measures

Special protective actions for fire-fighters	:	EN12916:2006 IP391-07 Cal. Soln A	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
		EN12916:2006 IP391-07 Cal. Soln B	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
		EN12916:2006 IP391-07 Cal. Soln C	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
		EN12916:2006 IP391-07 Cal. Soln D	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	:	EN12916:2006 IP391-07 Cal. Soln A	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		EN12916:2006 IP391-07 Cal. Soln B	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		EN12916:2006 IP391-07 Cal. Soln C	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		EN12916:2006 IP391-07 Cal. Soln D	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	EN12916:2006 IP391-07 Cal. Soln A	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
		EN12916:2006 IP391-07 Cal. Soln B	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in

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		hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	EN12916:2006 IP391-07 Cal. Soln C	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	EN12916:2006 IP391-07 Cal. Soln D	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders :	EN12916:2006 IP391-07 Cal. Soln A	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	EN12916:2006 IP391-07 Cal. Soln B	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	EN12916:2006 IP391-07 Cal. Soln C	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	EN12916:2006 IP391-07 Cal. Soln D	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions :	EN12916:2006 IP391-07 Cal. Soln A	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
	EN12916:2006 IP391-07 Cal. Soln B	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
	EN12916:2006 IP391-07 Cal. Soln C	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers,

Section 6. Accidental release measures

		waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
	EN12916:2006 IP391-07 Cal. Soln D	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up :	EN12916:2006 IP391-07 Cal. Soln A	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	EN12916:2006 IP391-07 Cal. Soln B	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	EN12916:2006 IP391-07 Cal. Soln C	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	EN12916:2006 IP391-07 Cal. Soln D	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures :	EN12916:2006 IP391-07 Cal. Soln A	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open

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	flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
EN12916:2006 IP391-07 Cal. Soln B	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
EN12916:2006 IP391-07 Cal. Soln C	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
EN12916:2006 IP391-07 Cal. Soln D	Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a

Section 7. Handling and storage

		compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	: EN12916:2006 IP391-07 Cal. Soln A	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	EN12916:2006 IP391-07 Cal. Soln B	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	EN12916:2006 IP391-07 Cal. Soln C	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	EN12916:2006 IP391-07 Cal. Soln D	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
7.2 Conditions for safe storage, including any incompatibilities	: EN12916:2006 IP391-07 Cal. Soln A	Store between the following temperatures: 18 to 25°C (64.4 to 77°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	EN12916:2006 IP391-07 Cal. Soln B	Store between the following temperatures: 18 to 25°C (64.4 to 77°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10)

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	and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
EN12916:2006 IP391-07 Cal. Soln C	Store between the following temperatures: 18 to 25°C (64.4 to 77°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
EN12916:2006 IP391-07 Cal. Soln D	Store between the following temperatures: 18 to 25°C (64.4 to 77°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations	:	EN12916:2006 IP391-07 Cal. Soln A	Industrial applications, Professional applications.
		EN12916:2006 IP391-07 Cal. Soln B	Industrial applications, Professional applications.
		EN12916:2006 IP391-07 Cal. Soln C	Industrial applications, Professional applications.
		EN12916:2006 IP391-07 Cal. Soln D	Industrial applications, Professional applications.
Industrial sector specific solutions	:	EN12916:2006 IP391-07 Cal. Soln A	Not available.
		EN12916:2006 IP391-07 Cal. Soln B	Not available.
		EN12916:2006 IP391-07 Cal. Soln C	Not available.
		EN12916:2006 IP391-07 Cal. Soln D	Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
EN12916:2006 IP391-07 Cal. Soln A	
Heptane	**ACGIH TLV (United States, 1/2022). [Heptane]** TWA: 400 ppm 8 hours. TWA: 1640 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m³ 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 400 ppm 8 hours. TWA: 1600 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2000 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2020).** TWA: 85 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 440 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 500 ppm 8 hours. TWA: 2000 mg/m³ 8 hours.
o-xylene	**ACGIH TLV (United States, 1/2022). [xylene]** TWA: 20 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 651 mg/m³ 15 minutes. **OSHA PEL 1989 (United States, 3/1989). [Xylenes (o-, m-, p-isomers)]** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2020).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018). [Xylenes]** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Fluorene	None.
Phenanthrene	None.
EN12916:2006 IP391-07 Cal. Soln B	
Heptane	**ACGIH TLV (United States, 1/2022). [Heptane]** TWA: 400 ppm 8 hours. TWA: 1640 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m³ 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 400 ppm 8 hours. TWA: 1600 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2000 mg/m³ 15 minutes.

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	NIOSH REL (United States, 10/2020). TWA: 85 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 440 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 500 ppm 8 hours. TWA: 2000 mg/m³ 8 hours.
o-xylene	**ACGIH TLV (United States, 1/2022). [xylene]** TWA: 20 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 651 mg/m³ 15 minutes. **OSHA PEL 1989 (United States, 3/1989). [Xylenes (o-, m-, p-isomers)]** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2020).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018). [Xylenes]** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Fluorene	None.
Phenanthrene	None.
EN12916:2006 IP391-07 Cal. Soln C	
Heptane	**ACGIH TLV (United States, 1/2022). [Heptane]** TWA: 400 ppm 8 hours. TWA: 1640 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m³ 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 400 ppm 8 hours. TWA: 1600 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2000 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2020).** TWA: 85 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 440 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 500 ppm 8 hours. TWA: 2000 mg/m³ 8 hours.
o-xylene	**ACGIH TLV (United States, 1/2022). [xylene]** TWA: 20 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 651 mg/m³ 15 minutes. **OSHA PEL 1989 (United States, 3/1989). [Xylenes (o-, m-, p-isomers)]** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.

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	STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2020).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** **[Xylenes]** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Fluorene	None.
Phenanthrene	None.
EN12916:2006 IP391-07 Cal. Soln D	
Heptane	**ACGIH TLV (United States, 1/2022).** **[Heptane]** TWA: 400 ppm 8 hours. TWA: 1640 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m³ 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 400 ppm 8 hours. TWA: 1600 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2000 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2020).** TWA: 85 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 440 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 500 ppm 8 hours. TWA: 2000 mg/m³ 8 hours.
Phenanthrene	None.

Biological exposure indices

Ingredient name	Exposure indices
EN12916:2006 IP391-07 Cal. Soln A	
o-xylene	**ACGIH BEI (United States, 1/2022)** **[XYLENES]** BEI: 1.5 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift.
Fluorene	**ACGIH BEI (United States, 1/2022)** **[POLYCYCLIC AROMATIC HYDROCARBONS]** BEI: 2.5 µg/l, 1-hydroxypyrene [in urine]. Sampling time: end of shift at end of workweek. BEI: Nonquantitative: Biological monitoring should be considered for this compound based on the review; however, a specific BEI® could not be determined due to insufficient data., 3-hydroxybenzo(a)pyrene [in urine]. Sampling time: end of shift at end of workweek.

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Phenanthrene	**ACGIH BEI (United States, 1/2022) [POLYCYCLIC AROMATIC HYDROCARBONS]** BEI: 2.5 µg/l, 1-hydroxypyrene [in urine]. Sampling time: end of shift at end of workweek. BEI: Nonquantitative: Biological monitoring should be considered for this compound based on the review; however, a specific BEI® could not be determined due to insufficient data., 3-hydroxybenzo(a)pyrene [in urine]. Sampling time: end of shift at end of workweek.
EN12916:2006 IP391-07 Cal. Soln B	
o-xylene	**ACGIH BEI (United States, 1/2022) [XYLENES]** BEI: 1.5 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift.
Fluorene	**ACGIH BEI (United States, 1/2022) [POLYCYCLIC AROMATIC HYDROCARBONS]** BEI: 2.5 µg/l, 1-hydroxypyrene [in urine]. Sampling time: end of shift at end of workweek. BEI: Nonquantitative: Biological monitoring should be considered for this compound based on the review; however, a specific BEI® could not be determined due to insufficient data., 3-hydroxybenzo(a)pyrene [in urine]. Sampling time: end of shift at end of workweek.
Phenanthrene	**ACGIH BEI (United States, 1/2022) [POLYCYCLIC AROMATIC HYDROCARBONS]** BEI: 2.5 µg/l, 1-hydroxypyrene [in urine]. Sampling time: end of shift at end of workweek. BEI: Nonquantitative: Biological monitoring should be considered for this compound based on the review; however, a specific BEI® could not be determined due to insufficient data., 3-hydroxybenzo(a)pyrene [in urine]. Sampling time: end of shift at end of workweek.
EN12916:2006 IP391-07 Cal. Soln C	
o-xylene	**ACGIH BEI (United States, 1/2022) [XYLENES]** BEI: 1.5 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift.
Fluorene	**ACGIH BEI (United States, 1/2022)**

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	[POLYCYCLIC AROMATIC HYDROCARBONS] BEI: 2.5 µg/l, 1-hydroxypyrene [in urine]. Sampling time: end of shift at end of workweek. BEI: Nonquantitative: Biological monitoring should be considered for this compound based on the review; however, a specific BEI® could not be determined due to insufficient data., 3-hydroxybenzo(a)pyrene [in urine]. Sampling time: end of shift at end of workweek.
Phenanthrene	**ACGIH BEI (United States, 1/2022) [POLYCYCLIC AROMATIC HYDROCARBONS]** BEI: 2.5 µg/l, 1-hydroxypyrene [in urine]. Sampling time: end of shift at end of workweek. BEI: Nonquantitative: Biological monitoring should be considered for this compound based on the review; however, a specific BEI® could not be determined due to insufficient data., 3-hydroxybenzo(a)pyrene [in urine]. Sampling time: end of shift at end of workweek.
EN12916:2006 IP391-07 Cal. Soln D	
Phenanthrene	**ACGIH BEI (United States, 1/2022) [POLYCYCLIC AROMATIC HYDROCARBONS]** BEI: 2.5 µg/l, 1-hydroxypyrene [in urine]. Sampling time: end of shift at end of workweek. BEI: Nonquantitative: Biological monitoring should be considered for this compound based on the review; however, a specific BEI® could not be determined due to insufficient data., 3-hydroxybenzo(a)pyrene [in urine]. Sampling time: end of shift at end of workweek.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : EN12916:2006 IP391-07 Cal. Soln A Liquid.
EN12916:2006 IP391-07 Cal. Soln B Liquid.
EN12916:2006 IP391-07 Cal. Soln C Liquid.
EN12916:2006 IP391-07 Cal. Soln D Liquid.

Color : EN12916:2006 IP391-07 Cal. Soln A Colorless.
EN12916:2006 IP391-07 Cal. Soln B Colorless.
EN12916:2006 IP391-07 Cal. Soln C Colorless.
EN12916:2006 IP391-07 Cal. Soln D Colorless.

Section 9. Physical and chemical properties and safety characteristics

Odor	:	EN12916:2006 IP391-07 Cal. Soln A	Not available.
		EN12916:2006 IP391-07 Cal. Soln B	Not available.
		EN12916:2006 IP391-07 Cal. Soln C	Not available.
		EN12916:2006 IP391-07 Cal. Soln D	Not available.
Odor threshold	:	EN12916:2006 IP391-07 Cal. Soln A	Not available.
		EN12916:2006 IP391-07 Cal. Soln B	Not available.
		EN12916:2006 IP391-07 Cal. Soln C	Not available.
		EN12916:2006 IP391-07 Cal. Soln D	Not available.
pH	:	EN12916:2006 IP391-07 Cal. Soln A	Not available.
		EN12916:2006 IP391-07 Cal. Soln B	Not available.
		EN12916:2006 IP391-07 Cal. Soln C	Not available.
		EN12916:2006 IP391-07 Cal. Soln D	Not available.
Melting point/freezing point	:	EN12916:2006 IP391-07 Cal. Soln A	-91°C (-131.8°F)
		EN12916:2006 IP391-07 Cal. Soln B	-91°C (-131.8°F)
		EN12916:2006 IP391-07 Cal. Soln C	-91°C (-131.8°F)
		EN12916:2006 IP391-07 Cal. Soln D	-91°C (-131.8°F)
Boiling point, initial boiling point, and boiling range	:	EN12916:2006 IP391-07 Cal. Soln A	98°C (208.4°F)
		EN12916:2006 IP391-07 Cal. Soln B	98°C (208.4°F)
		EN12916:2006 IP391-07 Cal. Soln C	98°C (208.4°F)
		EN12916:2006 IP391-07 Cal. Soln D	98°C (208.4°F)
Flash point	:	EN12916:2006 IP391-07 Cal. Soln A	Closed cup: -1.11°C (30°F)
		EN12916:2006 IP391-07 Cal. Soln B	Closed cup: -1.11°C (30°F)
		EN12916:2006 IP391-07 Cal. Soln C	Closed cup: -1.11°C (30°F)
		EN12916:2006 IP391-07 Cal. Soln D	Closed cup: -1.11°C (30°F)
Evaporation rate	:	EN12916:2006 IP391-07 Cal. Soln A	Not available.
		EN12916:2006 IP391-07 Cal. Soln B	Not available.
		EN12916:2006 IP391-07 Cal. Soln C	Not available.
		EN12916:2006 IP391-07 Cal. Soln D	Not available.

Section 9. Physical and chemical properties and safety characteristics

Flammability : EN12916:2006 IP391-07 Cal. Soln A — Not applicable.
EN12916:2006 IP391-07 Cal. Soln B — Not applicable.
EN12916:2006 IP391-07 Cal. Soln C — Not applicable.
EN12916:2006 IP391-07 Cal. Soln D — Not applicable.

Lower and upper explosion limit/flammability limit : EN12916:2006 IP391-07 Cal. Soln A — Lower: 1.05% Upper: 6.7%
EN12916:2006 IP391-07 Cal. Soln B — Lower: 1.05% Upper: 6.7%
EN12916:2006 IP391-07 Cal. Soln C — Lower: 1.05% Upper: 6.7%
EN12916:2006 IP391-07 Cal. Soln D — Lower: 1.05% Upper: 6.7%

Vapor pressure :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
EN12916:2006 IP391-07 Cal. Soln A						
Heptane	34.5	4.6				
o-xylene	5.25	0.7		25.652	3.4	
EN12916:2006 IP391-07 Cal. Soln B						
Heptane	34.5	4.6				
o-xylene	5.25	0.7		25.652	3.4	
EN12916:2006 IP391-07 Cal. Soln C						
Heptane	34.5	4.6				
EN12916:2006 IP391-07 Cal. Soln D						
Heptane	34.5	4.6				

Section 9. Physical and chemical properties and safety characteristics

Relative vapor density : EN12916:2006 IP391-07 Cal. Soln A 3.5 [Air = 1]
EN12916:2006 IP391-07 Cal. Soln B 3.5 [Air = 1]
EN12916:2006 IP391-07 Cal. Soln C 3.5 [Air = 1]
EN12916:2006 IP391-07 Cal. Soln D 3.5 [Air = 1]

Relative density : EN12916:2006 IP391-07 Cal. Soln A 0.684
EN12916:2006 IP391-07 Cal. Soln B 0.684
EN12916:2006 IP391-07 Cal. Soln C 0.684
EN12916:2006 IP391-07 Cal. Soln D 0.684

Solubility(ies) :

Media	Result
EN12916:2006 IP391-07 Cal. Soln A	
water	Insoluble
EN12916:2006 IP391-07 Cal. Soln B	
water	Insoluble
EN12916:2006 IP391-07 Cal. Soln C	
water	Insoluble
EN12916:2006 IP391-07 Cal. Soln D	
water	Insoluble

Partition coefficient: n-octanol/water : EN12916:2006 IP391-07 Cal. Soln A Not applicable.
EN12916:2006 IP391-07 Cal. Soln B Not applicable.
EN12916:2006 IP391-07 Cal. Soln C Not applicable.
EN12916:2006 IP391-07 Cal. Soln D Not applicable.

Auto-ignition temperature : EN12916:2006 IP391-07 Cal. Soln A 215°C (419°F)
EN12916:2006 IP391-07 Cal. Soln B 215°C (419°F)
EN12916:2006 IP391-07 Cal. Soln C 215°C (419°F)
EN12916:2006 IP391-07 Cal. Soln D 215°C (419°F)

Decomposition temperature : EN12916:2006 IP391-07 Cal. Soln A Not available.
EN12916:2006 IP391-07 Cal. Soln B Not available.
EN12916:2006 IP391-07 Cal. Soln C Not available.
EN12916:2006 IP391-07 Cal. Soln D Not available.

Section 9. Physical and chemical properties and safety characteristics

Viscosity	:	EN12916:2006 IP391-07 Cal. Soln A	Not available.
		EN12916:2006 IP391-07 Cal. Soln B	Not available.
		EN12916:2006 IP391-07 Cal. Soln C	Not available.
		EN12916:2006 IP391-07 Cal. Soln D	Not available.
Particle characteristics			
Median particle size	:	EN12916:2006 IP391-07 Cal. Soln A	Not applicable.
		EN12916:2006 IP391-07 Cal. Soln B	Not applicable.
		EN12916:2006 IP391-07 Cal. Soln C	Not applicable.
		EN12916:2006 IP391-07 Cal. Soln D	Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity	:	EN12916:2006 IP391-07 Cal. Soln A	No specific test data related to reactivity available for this product or its ingredients.
		EN12916:2006 IP391-07 Cal. Soln B	No specific test data related to reactivity available for this product or its ingredients.
		EN12916:2006 IP391-07 Cal. Soln C	No specific test data related to reactivity available for this product or its ingredients.
		EN12916:2006 IP391-07 Cal. Soln D	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	EN12916:2006 IP391-07 Cal. Soln A	The product is stable.
		EN12916:2006 IP391-07 Cal. Soln B	The product is stable.
		EN12916:2006 IP391-07 Cal. Soln C	The product is stable.
		EN12916:2006 IP391-07 Cal. Soln D	The product is stable.
10.3 Possibility of hazardous reactions	:	EN12916:2006 IP391-07 Cal. Soln A	Under normal conditions of storage and use, hazardous reactions will not occur.
		EN12916:2006 IP391-07 Cal. Soln B	Under normal conditions of storage and use, hazardous reactions will not occur.
		EN12916:2006 IP391-07 Cal. Soln C	Under normal conditions of storage and use, hazardous reactions will not occur.
		EN12916:2006 IP391-07 Cal. Soln D	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	EN12916:2006 IP391-07 Cal. Soln A	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
		EN12916:2006 IP391-07 Cal. Soln B	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
		EN12916:2006 IP391-07 Cal. Soln C	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder,

Section 10. Stability and reactivity

		drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
	EN12916:2006 IP391-07 Cal. Soln D	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

10.5 Incompatible materials :

EN12916:2006 IP391-07 Cal. Soln A	Reactive or incompatible with the following materials: oxidizing materials
EN12916:2006 IP391-07 Cal. Soln B	Reactive or incompatible with the following materials: oxidizing materials
EN12916:2006 IP391-07 Cal. Soln C	Reactive or incompatible with the following materials: oxidizing materials
EN12916:2006 IP391-07 Cal. Soln D	Reactive or incompatible with the following materials: oxidizing materials

10.6 Hazardous decomposition products :

EN12916:2006 IP391-07 Cal. Soln A	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
EN12916:2006 IP391-07 Cal. Soln B	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
EN12916:2006 IP391-07 Cal. Soln C	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
EN12916:2006 IP391-07 Cal. Soln D	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

Product/ingredient name	Result	Species	Dose	Exposure
EN12916:2006 IP391-07 Cal. Soln A				
Heptane	LC50 Inhalation Vapor	Rat	103 g/m³	4 hours
	LC50 Inhalation Vapor	Rat	48000 ppm	4 hours
o-xylene	LC50 Inhalation Vapor	Rat	27.559 mg/l	4 hours
Phenanthrene	LD50 Oral	Rat	1.8 g/kg	-
EN12916:2006 IP391-07 Cal. Soln B				
Heptane	LC50 Inhalation Vapor	Rat	103 g/m³	4 hours
	LC50 Inhalation Vapor	Rat	48000 ppm	4 hours
o-xylene	LC50 Inhalation Vapor	Rat	27.559 mg/l	4 hours
Phenanthrene	LD50 Oral	Rat	1.8 g/kg	-
EN12916:2006 IP391-07 Cal. Soln C				
Heptane	LC50 Inhalation Vapor	Rat	103 g/m³	4 hours
	LC50 Inhalation Vapor	Rat	48000 ppm	4 hours

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o-xylene	LC50 Inhalation Vapor	Rat	27.559 mg/l	4 hours
Phenanthrene	LD50 Oral	Rat	1.8 g/kg	-
EN12916:2006 IP391-07 Cal. Soln D				
Heptane	LC50 Inhalation Vapor	Rat	103 g/m³	4 hours
	LC50 Inhalation Vapor	Rat	48000 ppm	4 hours
Phenanthrene	LD50 Oral	Rat	1.8 g/kg	-

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
EN12916:2006 IP391-07 Cal. Soln A			
o-xylene	-	3	-
Fluorene	-	3	-
Phenanthrene	-	3	-
EN12916:2006 IP391-07 Cal. Soln B			
o-xylene	-	3	-
Fluorene	-	3	-
Phenanthrene	-	3	-
EN12916:2006 IP391-07 Cal. Soln C			
o-xylene	-	3	-
Fluorene	-	3	-
Phenanthrene	-	3	-
EN12916:2006 IP391-07 Cal. Soln D			
Phenanthrene	-	3	-

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
EN12916:2006 IP391-07 Cal. Soln A			
Heptane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
o-xylene	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
EN12916:2006 IP391-07 Cal. Soln B			
Heptane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
o-xylene	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
EN12916:2006 IP391-07 Cal. Soln C			
Heptane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
o-xylene	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
EN12916:2006 IP391-07 Cal. Soln D			
Heptane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result
EN12916:2006 IP391-07 Cal. Soln A	
EN12916:2006 IP391-07 Cal. Soln A	ASPIRATION HAZARD - Category 1
Heptane	ASPIRATION HAZARD - Category 1
o-xylene	ASPIRATION HAZARD - Category 1
EN12916:2006 IP391-07 Cal. Soln B	
EN12916:2006 IP391-07 Cal. Soln B	ASPIRATION HAZARD - Category 1
Heptane	ASPIRATION HAZARD - Category 1
o-xylene	ASPIRATION HAZARD - Category 1
EN12916:2006 IP391-07 Cal. Soln C	
EN12916:2006 IP391-07 Cal. Soln C	ASPIRATION HAZARD - Category 1
Heptane	ASPIRATION HAZARD - Category 1
o-xylene	ASPIRATION HAZARD - Category 1
EN12916:2006 IP391-07 Cal. Soln D	
EN12916:2006 IP391-07 Cal. Soln D	ASPIRATION HAZARD - Category 1
Heptane	ASPIRATION HAZARD - Category 1

Section 11. Toxicological information

Information on the likely routes of exposure :

EN12916:2006 IP391-07 Cal. Soln A	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
EN12916:2006 IP391-07 Cal. Soln B	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
EN12916:2006 IP391-07 Cal. Soln C	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
EN12916:2006 IP391-07 Cal. Soln D	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact :

EN12916:2006 IP391-07 Cal. Soln A	Causes serious eye irritation.
EN12916:2006 IP391-07 Cal. Soln B	Causes serious eye irritation.
EN12916:2006 IP391-07 Cal. Soln C	Causes serious eye irritation.
EN12916:2006 IP391-07 Cal. Soln D	Causes serious eye irritation.

Inhalation :

EN12916:2006 IP391-07 Cal. Soln A	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
EN12916:2006 IP391-07 Cal. Soln B	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
EN12916:2006 IP391-07 Cal. Soln C	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
EN12916:2006 IP391-07 Cal. Soln D	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact :

EN12916:2006 IP391-07 Cal. Soln A	Causes skin irritation.
EN12916:2006 IP391-07 Cal. Soln B	Causes skin irritation.
EN12916:2006 IP391-07 Cal. Soln C	Causes skin irritation.
EN12916:2006 IP391-07 Cal. Soln D	Causes skin irritation.

Ingestion :

EN12916:2006 IP391-07 Cal. Soln A	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
EN12916:2006 IP391-07 Cal. Soln B	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
EN12916:2006 IP391-07 Cal. Soln C	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
EN12916:2006 IP391-07 Cal. Soln D	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact :

EN12916:2006 IP391-07 Cal. Soln A	Adverse symptoms may include the following: pain or irritation watering redness
EN12916:2006 IP391-07 Cal. Soln B	Adverse symptoms may include the following:

Section 11. Toxicological information

pain or irritation
watering
redness

EN12916:2006 IP391-07 Cal. Soln C: Adverse symptoms may include the following:

pain or irritation
watering
redness

EN12916:2006 IP391-07 Cal. Soln D: Adverse symptoms may include the following:

pain or irritation
watering
redness

Inhalation :

EN12916:2006 IP391-07 Cal. Soln A: Adverse symptoms may include the following:

respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

EN12916:2006 IP391-07 Cal. Soln B: Adverse symptoms may include the following:

respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

EN12916:2006 IP391-07 Cal. Soln C: Adverse symptoms may include the following:

respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

EN12916:2006 IP391-07 Cal. Soln D: Adverse symptoms may include the following:

respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

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Skin contact :

EN12916:2006 IP391-07 Cal. Soln A	Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations
EN12916:2006 IP391-07 Cal. Soln B	Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations
EN12916:2006 IP391-07 Cal. Soln C	Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations
EN12916:2006 IP391-07 Cal. Soln D	Adverse symptoms may include the following: irritation redness

Ingestion :

EN12916:2006 IP391-07 Cal. Soln A	Adverse symptoms may include the following: nausea or vomiting reduced fetal weight increase in fetal deaths skeletal malformations
EN12916:2006 IP391-07 Cal. Soln B	Adverse symptoms may include the following: nausea or vomiting reduced fetal weight increase in fetal deaths skeletal malformations
EN12916:2006 IP391-07 Cal. Soln C	Adverse symptoms may include the following: nausea or vomiting reduced fetal weight increase in fetal deaths skeletal malformations
EN12916:2006 IP391-07 Cal. Soln D	Adverse symptoms may include the following: nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Section 11. Toxicological information

General	:	EN12916:2006 IP391-07 Cal. Soln A	No known significant effects or critical hazards.
		EN12916:2006 IP391-07 Cal. Soln B	No known significant effects or critical hazards.
		EN12916:2006 IP391-07 Cal. Soln C	No known significant effects or critical hazards.
		EN12916:2006 IP391-07 Cal. Soln D	No known significant effects or critical hazards.
Carcinogenicity	:	EN12916:2006 IP391-07 Cal. Soln A	No known significant effects or critical hazards.
		EN12916:2006 IP391-07 Cal. Soln B	No known significant effects or critical hazards.
		EN12916:2006 IP391-07 Cal. Soln C	No known significant effects or critical hazards.
		EN12916:2006 IP391-07 Cal. Soln D	No known significant effects or critical hazards.
Mutagenicity	:	EN12916:2006 IP391-07 Cal. Soln A	No known significant effects or critical hazards.
		EN12916:2006 IP391-07 Cal. Soln B	No known significant effects or critical hazards.
		EN12916:2006 IP391-07 Cal. Soln C	No known significant effects or critical hazards.
		EN12916:2006 IP391-07 Cal. Soln D	No known significant effects or critical hazards.
Reproductive toxicity	:	EN12916:2006 IP391-07 Cal. Soln A	Suspected of damaging fertility or the unborn child.
		EN12916:2006 IP391-07 Cal. Soln B	Suspected of damaging fertility or the unborn child.
		EN12916:2006 IP391-07 Cal. Soln C	Suspected of damaging fertility or the unborn child.
		EN12916:2006 IP391-07 Cal. Soln D	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
EN12916:2006 IP391-07 Cal. Soln A					
EN12916:2006 IP391-07 Cal. Soln A	56400.5	20680.2	N/A	206.8	N/A
Heptane	N/A	N/A	N/A	103	N/A
o-xylene	3000	1100	N/A	11	N/A
Phenanthrene	1800	N/A	N/A	N/A	N/A
EN12916:2006 IP391-07 Cal. Soln B					
EN12916:2006 IP391-07 Cal. Soln B	212992.8	78097.3	N/A	781.0	N/A
Heptane	N/A	N/A	N/A	103	N/A
o-xylene	3000	1100	N/A	11	N/A
Phenanthrene	1800	N/A	N/A	N/A	N/A
EN12916:2006 IP391-07 Cal. Soln C					
Heptane	N/A	N/A	N/A	103	N/A
o-xylene	3000	1100	N/A	11	N/A
Phenanthrene	1800	N/A	N/A	N/A	N/A
EN12916:2006 IP391-07 Cal. Soln D					
Heptane	N/A	N/A	N/A	103	N/A

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Phenanthrene	1800	N/A	N/A	N/A	N/A

Other information : EN12916:2006 IP391-07 Cal. Soln A: Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.

EN12916:2006 IP391-07 Cal. Soln B: Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.

EN12916:2006 IP391-07 Cal. Soln C: Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.

EN12916:2006 IP391-07 Cal. Soln D: Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
EN12916:2006 IP391-07 Cal. Soln A			
Heptane	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours
o-xylene	Acute EC50 10.7 mg/l Marine water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 1.39 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7600 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 1.57 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.714 mg/l Fresh water	Fish - Danio rerio	35 days
Fluorene	Acute EC50 212 µg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 0.82 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.125 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.125 mg/l Fresh water	Fish - Lepomis macrochirus - Fingerling	30 days
Phenanthrene	Acute EC50 0.279 mg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 0.117 mg/l Fresh water	Daphnia - Daphnia magna - Adult	48 hours
	Acute EC50 0.049 mg/l Fresh water	Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.658 mg/l Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 48 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.005 mg/l Fresh water	Fish - Oncorhynchus mykiss - Embryo	90 days
EN12916:2006 IP391-07 Cal. Soln B			
Heptane	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours
o-xylene	Acute EC50 10.7 mg/l Marine water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 1.39 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7600 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 1.57 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.714 mg/l Fresh water	Fish - Danio rerio	35 days

Section 12. Ecological information

Fluorene	Acute EC50 212 µg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 0.82 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.125 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.125 mg/l Fresh water	Fish - Lepomis macrochirus - Fingerling	30 days
Phenanthrene	Acute EC50 0.279 mg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 0.117 mg/l Fresh water	Daphnia - Daphnia magna - Adult	48 hours
	Acute EC50 0.049 mg/l Fresh water	Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.658 mg/l Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 48 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.005 mg/l Fresh water	Fish - Oncorhynchus mykiss - Embryo	90 days
EN12916:2006 IP391-07 Cal. Soln C			
Heptane	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours
o-xylene	Acute EC50 10.7 mg/l Marine water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 1.39 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7600 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 1.57 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.714 mg/l Fresh water	Fish - Danio rerio	35 days
Fluorene	Acute EC50 212 µg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 0.82 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.125 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.125 mg/l Fresh water	Fish - Lepomis macrochirus - Fingerling	30 days
Phenanthrene	Acute EC50 0.279 mg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 0.117 mg/l Fresh water	Daphnia - Daphnia magna - Adult	48 hours
	Acute EC50 0.049 mg/l Fresh water	Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.658 mg/l Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 48 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.005 mg/l Fresh water	Fish - Oncorhynchus mykiss - Embryo	90 days
EN12916:2006 IP391-07 Cal. Soln D			
Heptane	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours
Phenanthrene	Acute EC50 0.279 mg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 0.117 mg/l Fresh water	Daphnia - Daphnia magna - Adult	48 hours
	Acute EC50 0.049 mg/l Fresh water	Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.658 mg/l Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 48 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.005 mg/l Fresh water	Fish - Oncorhynchus mykiss - Embryo	90 days

Section 12. Ecological information

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
EN12916:2006 IP391-07 Cal. Soln A				
o-xylene	OECD 301F Ready Biodegradability - Manometric Respirometry Test	98 % - Readily - 28 days	-	-
EN12916:2006 IP391-07 Cal. Soln B				
o-xylene	OECD 301F Ready Biodegradability - Manometric Respirometry Test	98 % - Readily - 28 days	-	-
EN12916:2006 IP391-07 Cal. Soln C				
o-xylene	OECD 301F Ready Biodegradability - Manometric Respirometry Test	98 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
EN12916:2006 IP391-07 Cal. Soln A			
Heptane	-	-	Readily
o-xylene	-	-	Readily
EN12916:2006 IP391-07 Cal. Soln B			
Heptane	-	-	Readily
o-xylene	-	-	Readily
EN12916:2006 IP391-07 Cal. Soln C			
Heptane	-	-	Readily
o-xylene	-	-	Readily
EN12916:2006 IP391-07 Cal. Soln D			
Heptane	-	-	Readily

12.3 Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
EN12916:2006 IP391-07 Cal. Soln A			
Heptane	4.66	552	high
o-xylene	3.12	8.1 to 25.9	low
Fluorene	4.18	524.81	high
Phenanthrene	4.46	2511.89	high
EN12916:2006 IP391-07 Cal. Soln B			
Heptane	4.66	552	high
o-xylene	3.12	8.1 to 25.9	low
Fluorene	4.18	524.81	high
Phenanthrene	4.46	2511.89	high
EN12916:2006 IP391-07 Cal. Soln C			
Heptane	4.66	552	high
o-xylene	3.12	8.1 to 25.9	low
Fluorene	4.18	524.81	high
Phenanthrene	4.46	2511.89	high
EN12916:2006 IP391-07 Cal. Soln D			
Heptane	4.66	552	high
Phenanthrene	4.46	2511.89	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Section 13. Disposal considerations

Ingredient	CAS #	Status	Reference number
EN12916:2006 IP391-07 Cal. Soln A			
Xylene	95-47-6	Listed	U239
EN12916:2006 IP391-07 Cal. Soln B			
Xylene	95-47-6	Listed	U239

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

Additional information

Remarks: De minimis quantities

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations :
TSCA 8(a) PAIR: Heptane
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 307: Fluorene; Phenanthrene
Clean Water Act (CWA) 311: o-xylene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Section 15. Regulatory information

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification :

EN12916:2006 IP391-07 Cal. Soln A	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
EN12916:2006 IP391-07 Cal. Soln B	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
EN12916:2006 IP391-07 Cal. Soln C	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
EN12916:2006 IP391-07 Cal. Soln D	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1

Composition/information on ingredients

Name	%	Classification
EN12916:2006 IP391-07 Cal. Soln A		
Heptane	≥90	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
o-xylene	≤10	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
Fluorene	≤3	HNOC - Defatting irritant
EN12916:2006 IP391-07 Cal. Soln B		

Section 15. Regulatory information

Heptane	≥90	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
o-xylene	≤3	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
Fluorene	≤3	HNOC - Defatting irritant
EN12916:2006 IP391-07 Cal. Soln C		
Heptane	≥90	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
o-xylene	<1	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
EN12916:2006 IP391-07 Cal. Soln D		
Heptane	≥90	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	**EN12916:2006 IP391-07 Cal. Soln A** o-xylene	95-47-6	≤10
	EN12916:2006 IP391-07 Cal. Soln B o-xylene	95-47-6	≤3

Section 15. Regulatory information

Supplier notification	**EN12916:2006 IP391-07 Cal. Soln A** o-xylene	95-47-6	≤10
	EN12916:2006 IP391-07 Cal. Soln B o-xylene	95-47-6	≤3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: HEPTANE; O-XYLENE; FLUORENE

New York : The following components are listed: o-Xylene; Fluorene

New Jersey : The following components are listed: n-HEPTANE; o-XYLENE; FLUORENE

Pennsylvania : The following components are listed: HEPTANE; BENZENE, 1,2-DIMETHYL-; 9H-FLUORENE

California Prop. 65

⚠ **WARNING**: This product can expose you to Carbon-black extracts, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
EN12916:2006 IP391-07 Cal. Soln A Carbon-black extracts	-	-
EN12916:2006 IP391-07 Cal. Soln B Carbon-black extracts	-	-
EN12916:2006 IP391-07 Cal. Soln C Carbon-black extracts	-	-
EN12916:2006 IP391-07 Cal. Soln D Carbon-black extracts	-	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Ingredient name	List name	Status
EN12916:2006 IP391-07 Cal. Soln A		
PAHs	POPs - Annex 3	Listed
PAHs	-	Listed
EN12916:2006 IP391-07 Cal. Soln B		
PAHs	POPs - Annex 3	Listed
PAHs	-	Listed

Section 15. Regulatory information

EN12916:2006 IP391-07 Cal. Soln C PAHs	POPs - Annex 3	Listed

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: All components are listed or exempted.

Japan : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): All components are listed or exempted.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : All components are active or exempted.

Viet Nam : All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
EN12916:2006 IP391-07 Cal. Soln A	
FLAMMABLE LIQUIDS - Category 2	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
ASPIRATION HAZARD - Category 1	Expert judgment
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method
EN12916:2006 IP391-07 Cal. Soln B	
FLAMMABLE LIQUIDS - Category 2	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
ASPIRATION HAZARD - Category 1	Expert judgment
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method
EN12916:2006 IP391-07 Cal. Soln C	
FLAMMABLE LIQUIDS - Category 2	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method

Section 16. Other information

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
ASPIRATION HAZARD - Category 1	Expert judgment
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method
EN12916:2006 IP391-07 Cal. Soln D	
FLAMMABLE LIQUIDS - Category 2	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
ASPIRATION HAZARD - Category 1	Expert judgment
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method

History

Date of issue : 04/28/2023

Date of previous issue : 07/07/2020

Version : 7

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

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