

SAFETY DATA SHEET

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 : 5/21/2018

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

Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use

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

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
 H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver, nervous system) - Category 2
 H304 ASPIRATION HAZARD - Category 1
 H401 AQUATIC HAZARD (ACUTE) - Category 2

Section 2. Hazards identification

H410 AQUATIC HAZARD (LONG-TERM) - Category 1

EN12916:2006 IP391-07 Cal.

Soln B

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
 H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver, nervous system) - Category 2
 H304 ASPIRATION HAZARD - Category 1
 H401 AQUATIC HAZARD (ACUTE) - Category 2
 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
 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
 H402 AQUATIC HAZARD (ACUTE) - Category 3
 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
 H410 AQUATIC HAZARD (LONG-TERM) - Category 1

Ingredients of unknown toxicity

EN12916:2006 IP391-07 Cal. Soln A
 Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10%
 Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
 Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%

EN12916:2006 IP391-07 Cal. Soln B
 Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10%
 Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
 Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%

[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.
 H319 - Causes serious eye irritation.
 H315 - Causes skin irritation.
 H304 - May be fatal if swallowed and enters airways.
 H335 - May cause respiratory irritation.
 H336 - May cause drowsiness or dizziness.
 H373 - May cause damage to organs through prolonged or repeated exposure. (kidneys, liver, nervous system)
 H410 - Very toxic to aquatic life with long lasting effects.

EN12916:2006 IP391-07 Cal. Soln B
 H225 - Highly flammable liquid and vapor.
 H319 - Causes serious eye irritation.
 H315 - Causes skin irritation.
 H304 - May be fatal if swallowed and enters airways.
 H335 - May cause respiratory irritation.
 H336 - May cause drowsiness or dizziness.
 H373 - May cause damage to organs through prolonged or repeated exposure. (kidneys, liver, nervous system)
 H410 - Very toxic to aquatic life with long lasting effects.

EN12916:2006 IP391-07 Cal. Soln C
 H225 - Highly flammable liquid and vapor.
 H319 - Causes serious eye irritation.
 H315 - Causes skin irritation.

Section 2. Hazards identification

EN12916:2006 IP391-07 Cal. Soln D

H304 - May be fatal if swallowed and enters airways.
 H335 - May cause respiratory irritation.
 H336 - May cause drowsiness or dizziness.
 H410 - Very toxic to aquatic life with long lasting effects.
 H225 - Highly flammable liquid and vapor.

H319 - Causes serious eye irritation.
 H315 - Causes skin irritation.
 H304 - May be fatal if swallowed and enters airways.
 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

P280 - Wear protective gloves. Wear 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, lighting and all material-handling equipment.
 P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static discharge.
 P233 - Keep container tightly closed.
 P271 - Use only outdoors or in a well-ventilated area.
 P273 - Avoid release to the environment.
 P260 - Do not breathe vapor.
 P264 - Wash hands thoroughly after handling.

EN12916:2006 IP391-07 Cal. Soln B

P280 - Wear protective gloves. Wear 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, lighting and all material-handling equipment.
 P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static discharge.
 P233 - Keep container tightly closed.
 P271 - Use only outdoors or in a well-ventilated area.
 P273 - Avoid release to the environment.
 P260 - Do not breathe vapor.
 P264 - Wash hands thoroughly after handling.

EN12916:2006 IP391-07 Cal. Soln C

P280 - Wear protective gloves. Wear 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, lighting and all material-handling equipment.
 P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static

Section 2. Hazards identification

		<p>discharge.</p> <p>P233 - Keep container tightly closed.</p> <p>P271 - Use only outdoors or in a well-ventilated area.</p> <p>P273 - Avoid release to the environment.</p> <p>P261 - Avoid breathing vapor.</p> <p>P264 - Wash hands thoroughly after handling.</p> <p>P280 - Wear protective gloves. Wear eye or face protection.</p> <p>P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.</p> <p>P242 - Use only non-sparking tools.</p> <p>P243 - Take precautionary measures against static discharge.</p> <p>P233 - Keep container tightly closed.</p> <p>P271 - Use only outdoors or in a well-ventilated area.</p> <p>P273 - Avoid release to the environment.</p> <p>P261 - Avoid breathing vapor.</p> <p>P264 - Wash hands thoroughly after handling.</p>
	EN12916:2006 IP391-07 Cal. Soln D	<p>P391 - Collect spillage.</p>
Response	: EN12916:2006 IP391-07 Cal. Soln A	<p>P314 - Get medical attention if you feel unwell.</p> <p>P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.</p> <p>P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.</p> <p>P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.</p> <p>P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.</p> <p>P332 + P313 - If skin irritation occurs: Get medical attention.</p> <p>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337 + P313 - If eye irritation persists: Get medical attention.</p>
	EN12916:2006 IP391-07 Cal. Soln B	<p>P391 - Collect spillage.</p> <p>P314 - Get medical attention if you feel unwell.</p> <p>P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.</p> <p>P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.</p> <p>P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse</p>

Section 2. Hazards identification

EN12916:2006 IP391-07 Cal. Soln
C

skin with water or shower.
P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
P332 + P313 - If skin irritation occurs: Get medical attention.
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 attention.
P391 - Collect spillage.

EN12916:2006 IP391-07 Cal. Soln
D

P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
P332 + P313 - If skin irritation occurs: Get medical attention.
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 attention.
P391 - Collect spillage.

P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
P332 + P313 - If skin irritation occurs: Get medical attention.
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 attention.

Section 2. Hazards identification

Storage

EN12916:2006 IP391-07 Cal. Soln A	P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool.
EN12916:2006 IP391-07 Cal. Soln B	P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool.
EN12916:2006 IP391-07 Cal. Soln C	P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool.
EN12916:2006 IP391-07 Cal. Soln D	P405 - Store locked up. P403 - Store in a well-ventilated place. 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

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

Section 3. Composition/information on ingredients

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
Fluorene	≤0.83	86-73-7
Phenanthrene	≤0.1	85-01-8
EN12916:2006 IP391-07 Cal. Soln D		
Heptane	≥90	142-82-5
Phenanthrene	<0.025	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 as hazardous to health or the environment 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.

Section 4. First aid measures

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 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,

Section 4. First aid measures

		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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 C	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the

Section 4. First aid measures

EN12916:2006 IP391-07 Cal. Soln D	<p>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. Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.</p>
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4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	<p>: EN12916:2006 IP391-07 Cal. Soln Causes serious eye irritation. A</p> <p>EN12916:2006 IP391-07 Cal. Soln Causes serious eye irritation. B</p> <p>EN12916:2006 IP391-07 Cal. Soln Causes serious eye irritation. C</p> <p>EN12916:2006 IP391-07 Cal. Soln Causes serious eye irritation. D</p>
Inhalation	<p>: EN12916:2006 IP391-07 Cal. Soln Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. A</p> <p>EN12916:2006 IP391-07 Cal. Soln Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. B</p> <p>EN12916:2006 IP391-07 Cal. Soln Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. C</p> <p>EN12916:2006 IP391-07 Cal. Soln Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. D</p>
Skin contact	<p>: EN12916:2006 IP391-07 Cal. Soln Causes skin irritation. A</p> <p>EN12916:2006 IP391-07 Cal. Soln Causes skin irritation. B</p> <p>EN12916:2006 IP391-07 Cal. Soln Causes skin irritation. C</p> <p>EN12916:2006 IP391-07 Cal. Soln Causes skin irritation.</p>

Section 4. First aid measures

	D	
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
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
	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
	EN12916:2006 IP391-07 Cal. Soln C	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache

Section 4. First aid measures

		drowsiness/fatigue dizziness/vertigo unconsciousness
	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
	EN12916:2006 IP391-07 Cal. Soln B	Adverse symptoms may include the following: irritation redness
	EN12916:2006 IP391-07 Cal. Soln C	Adverse symptoms may include the following: irritation redness
	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
	EN12916:2006 IP391-07 Cal. Soln B	Adverse symptoms may include the following: nausea or vomiting
	EN12916:2006 IP391-07 Cal. Soln C	Adverse symptoms may include the following: nausea or vomiting
	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.

Section 4. First aid measures

Specific treatments	:	EN12916:2006 IP391-07 Cal. Soln	No specific treatment.
	A	EN12916:2006 IP391-07 Cal. Soln	No specific treatment.
	B	EN12916:2006 IP391-07 Cal. Soln	No specific treatment.
	C	EN12916:2006 IP391-07 Cal. Soln	No specific treatment.
D	EN12916:2006 IP391-07 Cal. Soln	No specific treatment.	
Protection of first-aiders	:	EN12916:2006 IP391-07 Cal. Soln	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.
	A	EN12916:2006 IP391-07 Cal. Soln	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.
	B	EN12916:2006 IP391-07 Cal. Soln	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.
	C	EN12916:2006 IP391-07 Cal. Soln	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.
D	EN12916:2006 IP391-07 Cal. Soln	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	Use dry chemical, CO ₂ , water spray (fog) or foam.
	A	EN12916:2006 IP391-07 Cal. Soln	Use dry chemical, CO ₂ , water spray (fog) or foam.
	B	EN12916:2006 IP391-07 Cal. Soln	Use dry chemical, CO ₂ , water spray (fog) or foam.
	C	EN12916:2006 IP391-07 Cal. Soln	Use dry chemical, CO ₂ , water spray (fog) or foam.
D	EN12916:2006 IP391-07 Cal. Soln	Use dry chemical, CO ₂ , water spray (fog) or foam.	
Unsuitable extinguishing media	:	EN12916:2006 IP391-07 Cal. Soln	Do not use water jet.
	A	EN12916:2006 IP391-07 Cal. Soln	Do not use water jet.
	B	EN12916:2006 IP391-07 Cal. Soln	Do not use water jet.
	C	EN12916:2006 IP391-07 Cal. Soln	Do not use water jet.
D	EN12916:2006 IP391-07 Cal. Soln	Do not use water jet.	

5.2 Special hazards arising from the substance or mixture

Section 5. Fire-fighting measures

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 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.

Section 5. Fire-fighting measures

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

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 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".

Section 6. Accidental release measures

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, 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). Do not breathe vapor or mist. Do not swallow. Avoid contact with eyes, skin and clothing. 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 B	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not swallow. Avoid contact with eyes, skin and clothing. 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). 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 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

Section 7. Handling and storage

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.

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

Section 7. Handling and storage

EN12916:2006 IP391-07 Cal. Soln B	incompatible materials before handling or use. 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 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.

Section 7. Handling and storage

Industrial sector specific solutions	A	EN12916:2006 IP391-07 Cal. Soln	Not applicable.
	B	EN12916:2006 IP391-07 Cal. Soln	Not applicable.
	C	EN12916:2006 IP391-07 Cal. Soln	Not applicable.
	D	EN12916:2006 IP391-07 Cal. Soln	Not applicable.

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	<p>ACGIH TLV (United States, 3/2017). TWA: 400 ppm 8 hours. TWA: 1640 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m³ 15 minutes.</p> <p>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.</p> <p>NIOSH REL (United States, 10/2016). TWA: 85 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 440 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 6/2016). TWA: 500 ppm 8 hours. TWA: 2000 mg/m³ 8 hours.</p>
o-xylene	<p>ACGIH TLV (United States, 3/2017). TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2016). TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 6/2016). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.</p>
Fluorene	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble</p> <p>NIOSH REL (United States, 10/2016). TWA: 0.1 mg/m³ 10 hours.</p>

Section 8. Exposure controls/personal protection

Phenanthrene

OSHA PEL (United States, 6/2016).TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble**NIOSH REL (United States, 10/2016).**TWA: 0.1 mg/m³ 10 hours.**OSHA PEL 1989 (United States, 3/1989).**TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble**OSHA PEL (United States, 6/2016).**TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble

EN12916:2006 IP391-07 Cal. Soln B

Heptane

ACGIH TLV (United States, 3/2017).

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, 10/2016).**

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, 6/2016).**

TWA: 500 ppm 8 hours.

TWA: 2000 mg/m³ 8 hours.

o-xylene

ACGIH TLV (United States, 3/2017).

TWA: 100 ppm 8 hours.

TWA: 434 mg/m³ 8 hours.

STEL: 150 ppm 15 minutes.

STEL: 651 mg/m³ 15 minutes.**OSHA PEL 1989 (United States, 3/1989).**

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, 10/2016).**

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, 6/2016).**

TWA: 100 ppm 8 hours.

TWA: 435 mg/m³ 8 hours.

Fluorene

OSHA PEL 1989 (United States, 3/1989).TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble**NIOSH REL (United States, 10/2016).**TWA: 0.1 mg/m³ 10 hours.**OSHA PEL (United States, 6/2016).**TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble

Section 8. Exposure controls/personal protection

Phenanthrene	<p>NIOSH REL (United States, 10/2016). TWA: 0.1 mg/m³ 10 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble</p> <p>OSHA PEL (United States, 6/2016). TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble</p>
<p>EN12916:2006 IP391-07 Cal. Soln C Heptane</p>	<p>ACGIH TLV (United States, 3/2017). TWA: 400 ppm 8 hours. TWA: 1640 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m³ 15 minutes.</p> <p>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.</p> <p>NIOSH REL (United States, 10/2016). TWA: 85 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 440 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 6/2016). TWA: 500 ppm 8 hours. TWA: 2000 mg/m³ 8 hours.</p>
Fluorene	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble</p> <p>NIOSH REL (United States, 10/2016). TWA: 0.1 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 6/2016). TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble</p>
Phenanthrene	<p>NIOSH REL (United States, 10/2016). TWA: 0.1 mg/m³ 10 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble</p> <p>OSHA PEL (United States, 6/2016). TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble</p>
<p>EN12916:2006 IP391-07 Cal. Soln D Heptane</p>	<p>ACGIH TLV (United States, 3/2017). TWA: 400 ppm 8 hours. TWA: 1640 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m³ 15 minutes.</p> <p>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.</p> <p>NIOSH REL (United States, 10/2016).</p>

Section 8. Exposure controls/personal protection

Phenanthrene	<p>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, 6/2016). TWA: 500 ppm 8 hours. TWA: 2000 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2016). TWA: 0.1 mg/m³ 10 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble OSHA PEL (United States, 6/2016). TWA: 0.2 mg/m³ 8 hours. Form: Benzene soluble</p>
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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

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.

Section 8. Exposure controls/personal protection

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	EN12916:2006 IP391-07 Cal. Soln	Liquid.
		A	
		EN12916:2006 IP391-07 Cal. Soln	Liquid.
		B	
		EN12916:2006 IP391-07 Cal. Soln	Liquid.
		C	
		EN12916:2006 IP391-07 Cal. Soln	Liquid.
		D	
Color	:	EN12916:2006 IP391-07 Cal. Soln	Colorless.
		A	
		EN12916:2006 IP391-07 Cal. Soln	Colorless.
		B	
		EN12916:2006 IP391-07 Cal. Soln	Colorless.
		C	
		EN12916:2006 IP391-07 Cal. Soln	Colorless.
		D	
Odor	:	EN12916:2006 IP391-07 Cal. Soln	Not available.
		A	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		B	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		C	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		D	
Odor threshold	:	EN12916:2006 IP391-07 Cal. Soln	Not available.
		A	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		B	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		C	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		D	
pH	:	EN12916:2006 IP391-07 Cal. Soln	Not available.
		A	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		B	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		C	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		D	
Melting point	:	EN12916:2006 IP391-07 Cal. Soln	-91°C (-131.8°F)
		A	
		EN12916:2006 IP391-07 Cal. Soln	-91°C (-131.8°F)
		B	
		EN12916:2006 IP391-07 Cal. Soln	-91°C (-131.8°F)
		C	
		EN12916:2006 IP391-07 Cal. Soln	-91°C (-131.8°F)
		D	

Section 9. Physical and chemical properties

Boiling point	:	EN12916:2006 IP391-07 Cal. Soln	98°C (208.4°F)
		A	
		EN12916:2006 IP391-07 Cal. Soln	98°C (208.4°F)
		B	
		EN12916:2006 IP391-07 Cal. Soln	98°C (208.4°F)
		C	
		EN12916:2006 IP391-07 Cal. Soln	98°C (208.4°F)
		D	
Flash point	:	EN12916:2006 IP391-07 Cal. Soln	Closed cup: -1.11°C (30°F)
		A	
		EN12916:2006 IP391-07 Cal. Soln	Closed cup: -1.11°C (30°F)
		B	
		EN12916:2006 IP391-07 Cal. Soln	Closed cup: -1.11°C (30°F)
		C	
		EN12916:2006 IP391-07 Cal. Soln	Closed cup: -1.11°C (30°F)
		D	
Evaporation rate	:	EN12916:2006 IP391-07 Cal. Soln	Not available.
		A	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		B	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		C	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		D	
Flammability (solid, gas)	:	EN12916:2006 IP391-07 Cal. Soln	Not applicable.
		A	
		EN12916:2006 IP391-07 Cal. Soln	Not applicable.
		B	
		EN12916:2006 IP391-07 Cal. Soln	Not applicable.
		C	
		EN12916:2006 IP391-07 Cal. Soln	Not applicable.
		D	
Lower and upper explosive (flammable) limits	:	EN12916:2006 IP391-07 Cal. Soln	Lower: 1.05%
		A	
			Upper: 6.7%
		EN12916:2006 IP391-07 Cal. Soln	Lower: 1.05%
		B	
			Upper: 6.7%
		EN12916:2006 IP391-07 Cal. Soln	Lower: 1.05%
		C	
			Upper: 6.7%
		EN12916:2006 IP391-07 Cal. Soln	Lower: 1.05%
		D	
			Upper: 6.7%
Vapor pressure	:	EN12916:2006 IP391-07 Cal. Soln	Not available.
		A	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		B	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		C	
		EN12916:2006 IP391-07 Cal. Soln	Not available.
		D	
Vapor density	:		

Section 9. Physical and chemical properties

	EN12916:2006 IP391-07 Cal. Soln	3.5 [Air = 1]
	A	
	EN12916:2006 IP391-07 Cal. Soln	3.5 [Air = 1]
	B	
	EN12916:2006 IP391-07 Cal. Soln	3.5 [Air = 1]
	C	
	EN12916:2006 IP391-07 Cal. Soln	3.5 [Air = 1]
	D	
Relative density	:	EN12916:2006 IP391-07 Cal. Soln 0.684
	A	
	EN12916:2006 IP391-07 Cal. Soln	0.684
	B	
	EN12916:2006 IP391-07 Cal. Soln	0.684
	C	
	EN12916:2006 IP391-07 Cal. Soln	0.684
	D	
Solubility	:	EN12916:2006 IP391-07 Cal. Soln Insoluble in the following materials: cold water and hot water.
	A	
	EN12916:2006 IP391-07 Cal. Soln	Insoluble in the following materials: cold water and hot water.
	B	
	EN12916:2006 IP391-07 Cal. Soln	Insoluble in the following materials: cold water and hot water.
	C	
	EN12916:2006 IP391-07 Cal. Soln	Insoluble in the following materials: cold water and hot water.
	D	
Partition coefficient: n-octanol/water	:	EN12916:2006 IP391-07 Cal. Soln Not available.
	A	
	EN12916:2006 IP391-07 Cal. Soln	Not available.
	B	
	EN12916:2006 IP391-07 Cal. Soln	Not available.
	C	
	EN12916:2006 IP391-07 Cal. Soln	Not available.
	D	
Auto-ignition temperature	:	EN12916:2006 IP391-07 Cal. Soln 215°C (419°F)
	A	
	EN12916:2006 IP391-07 Cal. Soln	215°C (419°F)
	B	
	EN12916:2006 IP391-07 Cal. Soln	215°C (419°F)
	C	
	EN12916:2006 IP391-07 Cal. Soln	215°C (419°F)
	D	
Decomposition temperature	:	EN12916:2006 IP391-07 Cal. Soln Not available.
	A	
	EN12916:2006 IP391-07 Cal. Soln	Not available.
	B	
	EN12916:2006 IP391-07 Cal. Soln	Not available.
	C	
	EN12916:2006 IP391-07 Cal. Soln	Not available.
	D	
Viscosity	:	EN12916:2006 IP391-07 Cal. Soln Not available.
	A	
	EN12916:2006 IP391-07 Cal. Soln	Not available.
	B	
	EN12916:2006 IP391-07 Cal. Soln	Not available.
	C	
	EN12916:2006 IP391-07 Cal. Soln	Not available.
	D	

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, 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

Section 10. Stability and reactivity

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/m ³	4 hours
	LC50 Inhalation Vapor	Rat	48000 ppm	4 hours
o-xylene	LC50 Inhalation Gas.	Rat	6350 ppm	4 hours
Phenanthrene	LD50 Oral	Rat	1.8 g/kg	-
EN12916:2006 IP391-07 Cal. Soln B				
Heptane	LC50 Inhalation Vapor	Rat	103 g/m ³	4 hours
	LC50 Inhalation Vapor	Rat	48000 ppm	4 hours
o-xylene	LC50 Inhalation Gas.	Rat	6350 ppm	4 hours
Phenanthrene	LD50 Oral	Rat	1.8 g/kg	-
EN12916:2006 IP391-07 Cal. Soln C				
Heptane	LC50 Inhalation Vapor	Rat	103 g/m ³	4 hours
	LC50 Inhalation Vapor	Rat	48000 ppm	4 hours
Phenanthrene	LD50 Oral	Rat	1.8 g/kg	-
EN12916:2006 IP391-07 Cal. Soln D				
Heptane	LC50 Inhalation Vapor	Rat	103 g/m ³	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

Section 11. Toxicological information

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			
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)

Name	Category	Route of exposure	Target organs
EN12916:2006 IP391-07 Cal. Soln A			
Heptane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
o-xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
EN12916:2006 IP391-07 Cal. Soln B			
Heptane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
o-xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
EN12916:2006 IP391-07 Cal. Soln C			
Heptane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
EN12916:2006 IP391-07 Cal. Soln D			
Heptane	Category 3	Not applicable.	Respiratory tract irritation and

Section 11. Toxicological information

Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
EN12916:2006 IP391-07 Cal. Soln A o-xylene	Category 2	Not determined	kidneys, liver and nervous system
EN12916:2006 IP391-07 Cal. Soln B o-xylene	Category 2	Not determined	kidneys, liver and nervous system

Aspiration hazard

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

Information on the likely routes of exposure

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

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.

Section 11. Toxicological information

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: 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 11. Toxicological information

Inhalation	: EN12916:2006 IP391-07 Cal. Soln	Adverse symptoms may include the following:
	A	respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	EN12916:2006 IP391-07 Cal. Soln	Adverse symptoms may include the following:
	B	respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	EN12916:2006 IP391-07 Cal. Soln	Adverse symptoms may include the following:
	C	respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	EN12916:2006 IP391-07 Cal. Soln	Adverse symptoms may include the following:
	D	respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: EN12916:2006 IP391-07 Cal. Soln	Adverse symptoms may include the following:
	A	irritation redness
	EN12916:2006 IP391-07 Cal. Soln	Adverse symptoms may include the following:
	B	irritation redness
	EN12916:2006 IP391-07 Cal. Soln	Adverse symptoms may include the following:
	C	irritation redness
	EN12916:2006 IP391-07 Cal. Soln	Adverse symptoms may include the following:
D	irritation redness	

Section 11. Toxicological information

Ingestion	A	EN12916:2006 IP391-07 Cal. Soln	Adverse symptoms may include the following: nausea or vomiting
	B	EN12916:2006 IP391-07 Cal. Soln	Adverse symptoms may include the following: nausea or vomiting
	C	EN12916:2006 IP391-07 Cal. Soln	Adverse symptoms may include the following: nausea or vomiting
	D	EN12916:2006 IP391-07 Cal. Soln	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

General	A	EN12916:2006 IP391-07 Cal. Soln	May cause damage to organs through prolonged or repeated exposure.
	B	EN12916:2006 IP391-07 Cal. Soln	May cause damage to organs through prolonged or repeated exposure.
	C	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
	D	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
Carcinogenicity	A	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
	B	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
	C	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
	D	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
Mutagenicity	A	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
	B	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
	C	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
	D	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
Teratogenicity	A	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
	B	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
	C	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.
	D	EN12916:2006 IP391-07 Cal. Soln	No known significant effects or critical hazards.

Section 11. Toxicological information

- Developmental effects** : EN12916:2006 IP391-07 Cal. Soln No known significant effects or critical hazards.
 A
 EN12916:2006 IP391-07 Cal. Soln No known significant effects or critical hazards.
 B
 EN12916:2006 IP391-07 Cal. Soln No known significant effects or critical hazards.
 C
 EN12916:2006 IP391-07 Cal. Soln No known significant effects or critical hazards.
 D
- Fertility effects** : EN12916:2006 IP391-07 Cal. Soln No known significant effects or critical hazards.
 A
 EN12916:2006 IP391-07 Cal. Soln No known significant effects or critical hazards.
 B
 EN12916:2006 IP391-07 Cal. Soln No known significant effects or critical hazards.
 C
 EN12916:2006 IP391-07 Cal. Soln No known significant effects or critical hazards.
 D

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
EN12916:2006 IP391-07 Cal. Soln A Oral Dermal Inhalation (gases)	56400.5 mg/kg 20680.2 mg/kg 119381.1 ppm
EN12916:2006 IP391-07 Cal. Soln B Oral Dermal Inhalation (gases)	212992.8 mg/kg 78097.3 mg/kg 450834.7 ppm

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

Section 12. Ecological information

12.1 Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
EN12916:2006 IP391-07 Cal. Soln A Heptane o-xylene Fluorene Phenanthrene	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours
	Acute EC50 4700 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 10700 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 1390 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7600 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 3.4 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	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
	Acute EC50 324 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	3 days
	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
EN12916:2006 IP391-07 Cal. Soln B Heptane o-xylene Fluorene Phenanthrene	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
	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours
	Acute EC50 4700 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 10700 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 1390 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7600 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 3.4 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	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
	Acute EC50 324 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	3 days
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,	96 hours	

Section 12. Ecological information

EN12916:2006 IP391-07 Cal. Soln C Heptane Fluorene Phenanthrene	Chronic NOEC 0.658 mg/l Fresh water Chronic NOEC 48 µg/l Fresh water	Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia magna - Neonate	96 hours 21 days
	Chronic NOEC 0.005 mg/l Fresh water	Fish - Oncorhynchus mykiss - Embryo	90 days
	Acute LC50 375000 µg/l Fresh water Acute EC50 3.4 mg/l Fresh water	Fish - Oreochromis mossambicus Algae - Pseudokirchneriella subcapitata	96 hours 96 hours
	Acute EC50 212 µg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 0.82 mg/l Fresh water Chronic NOEC 0.125 mg/l Fresh water Chronic NOEC 0.125 mg/l Fresh water	Fish - Oncorhynchus mykiss Daphnia - Daphnia magna Fish - Lepomis macrochirus - Fingerling	96 hours 21 days 30 days
	Acute EC50 324 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	3 days
	Acute EC50 0.279 mg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 0.117 mg/l Fresh water Acute EC50 0.049 mg/l Fresh water	Daphnia - Daphnia magna - Adult Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	48 hours 96 hours
	Chronic NOEC 0.658 mg/l Fresh water Chronic NOEC 48 µg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia magna - Neonate	96 hours 21 days
	Chronic NOEC 0.005 mg/l Fresh water	Fish - Oncorhynchus mykiss - Embryo	90 days
EN12916:2006 IP391-07 Cal. Soln D Heptane Phenanthrene	Acute LC50 375000 µg/l Fresh water Acute EC50 324 µg/l Fresh water	Fish - Oreochromis mossambicus Algae - Pseudokirchneriella subcapitata	96 hours 3 days
	Acute EC50 0.279 mg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 0.117 mg/l Fresh water Acute EC50 0.049 mg/l Fresh water	Daphnia - Daphnia magna - Adult Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	48 hours 96 hours
	Chronic NOEC 0.658 mg/l Fresh water Chronic NOEC 48 µg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia magna - Neonate	96 hours 21 days
	Chronic NOEC 0.005 mg/l Fresh water	Fish - Oncorhynchus mykiss - Embryo	90 days

[12.2 Persistence and degradability](#)

Section 12. Ecological information

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

12.3 Bioaccumulative potential

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
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

Section 13. Disposal considerations

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

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 Annex II of MARPOL and the IBC Code : 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

Section 15. Regulatory information

Clean Air Act Section 602 : Not listed
Class II Substances

DEA List I Chemicals : Not listed
(Precursor Chemicals)

DEA List II Chemicals : Not listed
(Essential Chemicals)

SARA 302/304

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 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver, nervous system) - Category 2 ASPIRATION HAZARD - Category 1
EN12916:2006 IP391-07 Cal. Soln B	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 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver, nervous system) - Category 2 ASPIRATION HAZARD - Category 1
EN12916:2006 IP391-07 Cal. Soln C	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
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

Section 15. Regulatory information

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 - Defatting irritant
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 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver, nervous system) - Category 2 ASPIRATION HAZARD - Category 1
EN12916:2006 IP391-07 Cal. Soln B 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 - Defatting irritant
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 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver, nervous system) - Category 2 ASPIRATION HAZARD - Category 1
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 - Defatting irritant
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) -

Section 15. Regulatory information

Category 3
ASPIRATION HAZARD - Category 1
HNOC - Defatting irritant

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
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; N-HEPTANE; O-XYLENE; O-DIMETHYLBENZENE; FLUORENE
- New York** : The following components are listed: o-Xylene; Fluorene
- New Jersey** : The following components are listed: n-HEPTANE; HEPTANE; o-XYLENE; BENZENE, 1,2-DIMETHYL-; FLUORENE; 9H-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 (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Section 15. Regulatory information

[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 PAHs	POPs - Annex 3 POPs - Annex 3	Listed Listed
EN12916:2006 IP391-07 Cal. Soln B PAHs PAHs	POPs - Annex 3 POPs - Annex 3	Listed Listed
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.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
Malaysia	: Not determined.
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	: <input checked="" type="checkbox"/> Not determined.
Turkey	: Not determined.
United States	: All components are listed or exempted.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

Section 16. Other information

[History](#)

Date of issue	: 05/21/2018
Date of previous issue	: 04/28/2016
Version	: 5

[Procedure used to derive the classification](#)

Classification	Justification
EN12916:2006 IP391-07 Cal. Soln A 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 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver, nervous system) - Category 2	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

Section 16. Other information

ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 1	Expert judgment Calculation method Calculation method
EN12916:2006 IP391-07 Cal. Soln B 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 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver, nervous system) - Category 2 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Expert judgment Calculation method Calculation method
EN12916:2006 IP391-07 Cal. Soln C 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 AQUATIC HAZARD (ACUTE) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Expert judgment Calculation method Calculation method
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 AQUATIC HAZARD (LONG-TERM) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Expert judgment Calculation method

📌 Indicates information that has changed from previously issued version.

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