

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



AFB III Staining Kit

Version 1 . 0

Revision Date 10-04-2012

Print Date 05-20-2013

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Commercial Product Name : AFB III Staining Kit
Mat.-No./ Genisys-No. : 05279437001

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

Recommended restrictions on use : For professional users only.

1.3 Details of the supplier of the safety data sheet

Company	:	Roche Diagnostics Limited Charles Avenue Burgess Hill RH15 9RY West Sussex
E-mail address	:	-
Telephone	:	+44 1444 256000
Telefax	:	+44 1444 256239
Responsible Department	:	-
In case of emergencies: (Roche Diagnostics Ltd.)	:	Health, Safety & Environment +44 1444 256500 or +44 7802 260498 - Product Safety / Vigilance +44 1444 256561 or +44 7710 391653
Toxicology 24Hr help-line:	:	NPIS: +44 844 892 0111
Health Advice 24Hr help-line:	:	NHS Direct: +44 845 4647 NHS 24: +44 8454 242424

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Corrosive to metals, Category 1	H290: May be corrosive to metals.
Acute toxicity, Category 3	H301: Toxic if swallowed.
Acute toxicity, Category 3	H331: Toxic if inhaled.
Acute toxicity, Category 3	H311: Toxic in contact with skin.
Skin corrosion, Category 1A	H314: Causes severe skin burns and eye damage.
Germ cell mutagenicity, Category 2	H341: Suspected of causing genetic defects.
Carcinogenicity, Category 1B	H350: May cause cancer.
Specific target organ toxicity - single exposure, Category 1	H370: Causes damage to organs.

Classification (67/548/EEC, 1999/45/EC)

Flammable	R10: Flammable.
Toxic	R39/23/24/25, R45: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed., May cause cancer.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.
H290 May be corrosive to metals.
H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H370 Causes damage to organs.

Precautionary statements : **Prevention:**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P234 Keep only in original container.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable

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for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/ physician.

P322 Specific measures (see supplemental first aid instructions on this label).

P361 Remove/Take off immediately all contaminated clothing.

P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P390 Absorb spillage to prevent material damage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labelling:

Restricted to professional users.

2.3 Other hazards

No information available.

3. Composition/information on ingredients

3.2 Mixtures

AFB Stain

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3

H226: Flammable liquid and vapour.

Skin corrosion, Category 1B

H314: Causes severe skin burns and eye damage.

Germ cell mutagenicity, Category 2

H341: Suspected of causing genetic defects.

Carcinogenicity, Category 1B

H350: May cause cancer.

Classification (67/548/EEC, 1999/45/EC)

Flammable

R10: Flammable.

Carcinogenic Category 2

R45: May cause cancer.

Corrosive

R34: Causes burns.

Harmful

R20/21/22: Harmful by inhalation, in contact with

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Mutagenic Category 3

skin and if swallowed.

R68: Possible risk of irreversible effects.

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
ethanol	64-17-5 200-578-6	F; R11	Flam. Liq. 2; H225	>= 25 - < 50
phenol	108-95-2 203-632-7	Mut.Cat.3; R68 T; R23/24/25 C; R34 Xn; R48/20/21/22	Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 Skin Corr. 1B; H314 Muta. 2; H341 STOT RE 2; H373	>= 5 - < 10
4,4'-(4-iminocyclohexa- 2,5- dienylidenemethylene)d ianiline hydrochloride	569-61-9 209-321-2	Carc.Cat.2; R45	Carc. 1B; H350	>= 0.1 - < 10

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

AFB Decolorizer II

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Corrosive to metals, Category 1	H290: May be corrosive to metals.
Acute toxicity, Category 3	H301: Toxic if swallowed.
Acute toxicity, Category 3	H331: Toxic if inhaled.
Acute toxicity, Category 3	H311: Toxic in contact with skin.
Skin corrosion, Category 1A	H314: Causes severe skin burns and eye damage.
Specific target organ toxicity - single exposure, Category 1	H370: Causes damage to organs.

Classification (67/548/EEC, 1999/45/EC)

Flammable	R10: Flammable.
Toxic	R23/24/25, R39/23/24/25: Toxic by inhalation, in contact with skin and if swallowed., Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
Corrosive	R35: Causes severe burns.

Hazardous components

Chemical Name	CAS-No.	Classification	Classification	Concentration
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	EC-No. Registration number	(67/548/EEC)	(REGULATION (EC) No 1272/2008)	[%]
methanol	67-56-1 200-659-6	F; R11 T; R23/24/25- R39/23/24/25	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370	>= 50 - <= 100
sulphuric acid	7664-93-9 231-639-5	C; R35	Skin Corr. 1A; H314	>= 5 - < 10

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

AFB III Blue

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Classification (67/548/EEC, 1999/45/EC)

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

Remarks : No dangerous ingredients according to Regulation (EC) No. 1907/2006

4. First aid measures

4.1 Description of first aid measures

General advice

- : Move out of dangerous area.
- Consult a physician.
- Show this safety data sheet to the doctor in attendance.
- Do not leave the victim unattended.

If inhaled

- : Move to fresh air.
- If unconscious place in recovery position and seek medical advice.
- If symptoms persist, call a physician.

In case of skin contact

- : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
- If on skin, rinse well with water.
- If on clothes, remove clothes.

In case of eye contact

- : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
- In the case of contact with eyes, rinse immediately with plenty

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of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self contained breathing apparatus for fire fighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

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6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions

- Use personal protective equipment.
- Remove all sources of ignition.
- Evacuate personnel to safe areas.
- Refer to protective measures listed in sections 7 and 8.
- Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Environmental precautions

- Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

- Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

Treat recovered material as described in the section "Disposal considerations".

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

- : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
To prevent leaks or spillages from spreading, provide a suitable liquid retention system.

Advice on protection against fire and explosion

- Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from open flames, hot surfaces and sources of ignition.

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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

- : No smoking.
- Keep container tightly closed in a dry and well-ventilated place.
- Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Observe label precautions.
- Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions

- : See label, package insert or internal guidelines

Other data

- : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Laboratory chemicals

8. Exposure controls/personal protection

Exposure Guidelines

AFB Stain

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Source
ethanol	64-17-5	TWA	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		TWA	1,000 ppm 1,900 mg/m ³	USA. NIOSH Recommended Exposure Limits
		TWA	1,000 ppm 1,900 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	1,000 ppm 1,900 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
phenol	108-95-2	TWA	5 ppm	USA. ACGIH Threshold Limit Values (TLV)
		TWA	5 ppm 19 mg/m ³	USA. NIOSH Recommended Exposure Limits
		C	15.6 ppm 60 mg/m ³	USA. NIOSH Recommended Exposure Limits
		TWA	5 ppm 19 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air

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				Contaminants
		TWA	5 ppm 19 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

AFB Decolorizer II

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Source
methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
		TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		TWA	200 ppm 260 mg/m ³	USA. NIOSH Recommended Exposure Limits
		TWA	200 ppm 260 mg/m ³	USA. NIOSH Recommended Exposure Limits
		ST	250 ppm 325 mg/m ³	USA. NIOSH Recommended Exposure Limits
		ST	250 ppm 325 mg/m ³	USA. NIOSH Recommended Exposure Limits
		TWA	200 ppm 260 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	200 ppm 260 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	200 ppm 260 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	200 ppm 260 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	250 ppm 325 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

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		STEL	250 ppm 325 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
sulphuric acid	7664-93-9	TWA	0.2 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		TWA	1 mg/m ³	USA. NIOSH Recommended Exposure Limits
		TWA	1 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	1 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

AFB III Blue

Contains no substances with occupational exposure limit values.

Personal protective equipment

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection :
Protective gloves

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
This recommendation is only valid for the product mentioned in the safety data sheet and provided by us and for the application specified by us.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : In the case of vapour formation use a respirator with an

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approved filter.

Hygiene measures : Avoid contact with skin, eyes and clothing.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

AFB Stain

Appearance : liquid
Colour : dark red
Odour : alcohol-like
pH : 6.65
Melting point/range : no data available
Boiling point/boiling range : no data available
Flash point : 37.8 °C
Lower explosion limit : no data available
Upper explosion limit : no data available
Vapour pressure : no data available
Water solubility : completely miscible
Partition coefficient: n-octanol/water : no data available
Ignition temperature : no data available
Thermal decomposition : no data available
Viscosity, dynamic : no data available
Oxidizing properties : The substance or mixture is not classified as oxidizing.

AFB Decolorizer II

Appearance : liquid
Colour : light yellow
Odour : none
pH : 0.2
Melting point/range : no data available
Boiling point/boiling range : no data available
Flash point : 23.9 °C
Lower explosion limit : no data available
Upper explosion limit : no data available

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Vapour pressure	: no data available
Water solubility	: completely miscible
Partition coefficient: n-octanol/water	: no data available
Ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: no data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
<i>AFB III Blue</i>	
Appearance	: liquid
Colour	: blue
Odour	: vinegar-like
pH	: 4.5
Melting point/range	: no data available
Boiling point/boiling range	: no data available
Flash point	: not applicable
Flammability (solid, gas)	: The product is not flammable.
Lower explosion limit	: no data available
Upper explosion limit	: no data available
Vapour pressure	: no data available
Partition coefficient: n-octanol/water	: no data available
Ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: no data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

9.2 Other information

<i>AFB Stain</i>	
Conductivity	: no data available
Oxidising potential	: no data available
Surface tension	: no data available
<i>AFB Decolorizer II</i>	
Conductivity	: no data available
Oxidising potential	: no data available
Surface tension	: no data available
<i>AFB III Blue</i>	
Conductivity	: no data available

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Acute dermal toxicity	: no data available
Acute toxicity (other routes of administration)	: no data available
Skin corrosion/irritation	: This information is not available.
Serious eye damage/eye irritation	: This information is not available.
Respiratory or skin sensitization	: Result: no data available
STOT - single exposure	: Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
Aspiration toxicity	: no data available
Further information	: no data available
phenol :	
Acute oral toxicity	: LD50 Oral: 317 mg/kg, rat
	: LD50 Oral: 270 mg/kg, mouse
Acute inhalation toxicity	: LC50: 0.9 mg/l, 8 h, rat,
Acute dermal toxicity	: LD50 Dermal: 669 mg/kg, rat
	: LD50 Dermal: 630 mg/kg, rabbit
Skin corrosion/irritation	: Extremely corrosive and destructive to tissue.
Serious eye damage/eye irritation	: May cause irreversible eye damage.
Respiratory or skin sensitization	: no data available
Germ cell mutagenicity	
Genotoxicity in vitro	: In vitro tests showed mutagenic effects
Assessment	: In vitro tests showed mutagenic effects
Carcinogenicity	: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
STOT - single exposure	: Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	: Assessment: May cause damage to organs through prolonged or repeated exposure.
Aspiration toxicity	: No aspiration toxicity classification
Further information	: Symptoms of overexposure are dizziness, headache,

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tiredness, nausea, unconsciousness, cessation of breathing.

4,4'-(4-iminocyclohexa-2,5-dienylideneethylene)dianiline hydrochloride :

Acute oral toxicity	: LD50 Oral: 5,000 mg/kg, mouse
Acute inhalation toxicity	: no data available
Acute dermal toxicity	: no data available
Acute toxicity (other routes of administration)	: no data available
Skin corrosion/irritation	: This information is not available.
Serious eye damage/eye irritation	: This information is not available.
Respiratory or skin sensitization	: Result: no data available
STOT - single exposure	: Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	: Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration toxicity	: no data available
Further information	: no data available

AFB Decolorizer II

Components:

methanol :

Acute oral toxicity	: Acute toxicity estimate: 100 mg/kg, Expert judgement
	: LD50 Oral: 7,300 mg/kg, mouse
	: LD50 Oral: 5,600 mg/kg, rat
Acute inhalation toxicity	: Acute toxicity estimate: 3 mg/l, vapour, Expert judgement
	: LC50: 85.26 mg/l, 4 h, rat,
	: LC50: 64000 ppm, 4 h, rat,
Acute dermal toxicity	: Acute toxicity estimate: 300 mg/kg, Expert judgement
	: LD50 Dermal: 15,800 mg/kg, rabbit
Acute toxicity (other routes of administration)	: no data available
Skin corrosion/irritation	: The product may be absorbed through the skin., May irritate skin.
Serious eye damage/eye irritation	: Contact with eyes may cause irritation.
Respiratory or skin sensitization	: guinea pig, Did not cause sensitization on laboratory animals.

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Germ cell mutagenicity

Genotoxicity in vitro : Ames test, Result: negative

Genotoxicity in vivo : Result: negative

STOT - single exposure : Assessment: Causes damage to organs.

STOT - repeated exposure : Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity : No aspiration toxicity classification

Further information : Solvents may degrease the skin.

sulphuric acid :

Acute oral toxicity : LD50 Oral: 2,140 mg/kg, rat

Acute inhalation toxicity : LC50: 0.51 mg/l, 2 h, rat,

: LC50: 0.32 mg/l, 2 h, mouse,

Acute dermal toxicity : no data available

Acute toxicity (other routes of administration) : no data available

Skin corrosion/irritation : Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation : May cause irreversible eye damage.

Respiratory or skin sensitization : no data available

Germ cell mutagenicity

Genotoxicity in vitro : Ames test, Result: negative, In vitro tests did not show mutagenic effects

STOT - single exposure : Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure : Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity : No aspiration toxicity classification

Further information : no data available

AFB III Blue

No ingredients are hazardous according to OHSA criteria.

12. Ecological information

12.1 Toxicity

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AFB Stain Components:

ethanol :

Toxicity to fish : LC50: 8,000 mg/l, 48 h, *Leuciscus idus* (Golden orfe),
: LC50: 7,100 mg/l, *Oncorhynchus mykiss* (rainbow trout),
OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates : EC50: 5,400 mg/l, 48 h, *Daphnia magna* (Water flea)
Toxicity to algae : EC0: 5,000 mg/l, 7 d, *Scenedesmus quadricauda* (Green algae)
Toxicity to bacteria : EC0: 6,500 mg/l, 16 h, *Pseudomonas putida*

Ecotoxicology Assessment

Toxicity Data on Soil : Not expected to adsorb on soil.
Other organisms relevant to the environment : no data available

phenol :

Toxicity to fish : LC50: 1.75 mg/l, 96 h, *Cyprinus carpio* (Carp)
: LC50: 46 mg/l, 24 h, *Carassius auratus* (goldfish)
Toxicity to daphnia and other aquatic invertebrates : LC50: 5 mg/l, 96 h, *Oncorhynchus mykiss* (rainbow trout)
: EC50: 12 mg/l, 24 h, *Daphnia magna* (Water flea)
: EC50: 10 mg/l, 48 h, *Daphnia magna* (Water flea)
Toxicity to algae : EC50: 4.2 mg/l, 48 h, *Daphnia magna* (Water flea)
: IC50: 150 mg/l, 96 h, *Pseudokirchneriella subcapitata* (green algae), OECD Test Guideline 201
Toxicity to bacteria : EC50: 370 mg/l, 96 h, *Chlorella vulgaris* (Fresh water algae)
: 64 mg/l, *Pseudomonas putida*

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known eco-toxicological effects.
Chronic aquatic toxicity : This product has no known eco-toxicological effects.
Toxicity Data on Soil : Not expected to adsorb on soil.
Other organisms relevant to the environment : no data available

4,4'-(4-iminocyclohexa-2,5-dienylidene)methylene)dianiline hydrochloride :

Toxicity to fish : no data available
Toxicity to daphnia and other aquatic invertebrates : no data available
Toxicity to algae : no data available
Toxicity to bacteria : no data available

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known eco-toxicological effects.

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Chronic aquatic toxicity : This product has no known eco-toxicological effects.

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to the environment : no data available

AFB Decolorizer II

Components:

methanol :

Toxicity to fish : LC50: 15,400 mg/l, 96 h, Lepomis macrochirus (Bluegill sunfish)
: LC50: 8,000 mg/l, 48 h, Oncorhynchus mykiss (rainbow trout)
: LC50: > 10,000 mg/l, Leuciscus idus (Golden orfe)
: EC50: > 10,000 mg/l, 48 h, Daphnia magna (Water flea)
Toxicity to daphnia and other aquatic invertebrates
Toxicity to algae
Toxicity to bacteria

Ecotoxicology Assessment

Toxicity Data on Soil : Not expected to adsorb on soil.
Other organisms relevant to the environment : no data available

sulphuric acid :

Toxicity to fish : LC50: 25 mg/l, 24 h, Lepomis macrochirus (Bluegill sunfish)
: LC50: 42 mg/l, 96 h, Gambusia affinis (Mosquito fish)
: LC0: 6.3 mg/l, 24 h, Fish
Toxicity to daphnia and other aquatic invertebrates
Toxicity to algae
Toxicity to bacteria

Ecotoxicology Assessment

Toxicity Data on Soil : Not expected to adsorb on soil.
Other organisms relevant to the environment : no data available

AFB III Blue

No ingredients are hazardous according to OHSA criteria.

12.2 Persistence and degradability

AFB Stain Components:

ethanol :

Biodegradability : no data available

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phenol :

Biodegradability : 96 %, Exposure time: 28 d, OECD Test Guideline 302, According to the results of tests of biodegradability this product is considered as being readily biodegradable.

4,4'-(4-iminocyclohexa-2,5-dienylidene)methylene)dianiline hydrochloride :

Biodegradability : no data available

AFB Decolorizer II

Components:

methanol :

Biodegradability : 99 %, Result: Readily biodegradable., Exposure time: 30 d, OECD Test Guideline 301

sulphuric acid :

Biodegradability : no data available

AFB III Blue

No ingredients are hazardous according to OHSA criteria.

12.3 Bioaccumulative potential

AFB Stain

Components:

ethanol :

Bioaccumulation : no data available

phenol :

Bioaccumulation : no data available

4,4'-(4-iminocyclohexa-2,5-dienylidene)methylene)dianiline hydrochloride :

Bioaccumulation : no data available

AFB Decolorizer II

Components:

methanol :

Bioaccumulation : Does not bioaccumulate.

sulphuric acid :

Bioaccumulation : no data available

AFB III Blue

No ingredients are hazardous according to OHSA criteria.

12.4 Mobility in soil

AFB Stain

Components:

ethanol :

Mobility : no data available

Distribution among : no data available

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environmental compartments : no data available
Environmental fate and pathways : no data available
Physico-chemical removability : no data available

phenol :
Mobility : no data available
Distribution among environmental compartments : no data available
Environmental fate and pathways : no data available
Physico-chemical removability : no data available

4,4'-(4-iminocyclohexa-2,5-dienylidenemethylene)dianiline hydrochloride :

Mobility : no data available
Distribution among environmental compartments : no data available
Environmental fate and pathways : no data available
Physico-chemical removability : no data available

AFB Decolorizer II

Components:

methanol :
Mobility : no data available
Distribution among environmental compartments : no data available
Environmental fate and pathways : no data available
Physico-chemical removability : no data available

sulphuric acid :

Mobility : no data available
Distribution among environmental compartments : no data available
Environmental fate and pathways : no data available
Physico-chemical removability : no data available

AFB III Blue

No ingredients are hazardous according to OHSA criteria.

12.5 Results of PBT and vPvB assessment

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AFB Stain

Components:

ethanol :

Assessment

: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

phenol :

Assessment

: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

4,4'-(4-iminocyclohexa-2,5-dienyldenemethylene)dianiline hydrochloride :

Assessment

: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

AFB Decolorizer II

Components:

methanol :

Assessment

: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

sulphuric acid :

Assessment

: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

AFB III Blue

No ingredients are hazardous according to OHSA criteria.

12.6 Other adverse effects

AFB Stain

Components:

ethanol :

Biochemical Oxygen Demand (BOD)	: no data available
Dissolved organic carbon (DOC)	: no data available
Chemical Oxygen Demand (COD)	: no data available

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Adsorbed organic bound halogens (AOX) : no data available

phenol :

Biochemical Oxygen Demand (BOD) : 1,680 mg/g, 5 d

Dissolved organic carbon (DOC) : no data available

Chemical Oxygen Demand (COD) : 2,300 mg/g

Adsorbed organic bound halogens (AOX) : no data available

4,4'-(4-iminocyclohexa-2,5-dienyldenemethylene)dianiline hydrochloride :

Biochemical Oxygen Demand (BOD) : no data available

Dissolved organic carbon (DOC) : no data available

Chemical Oxygen Demand (COD) : no data available

Adsorbed organic bound halogens (AOX) : not applicable

Additional ecological information : no data available

AFB Decolorizer II

Components:

methanol :

Biochemical Oxygen Demand (BOD) : 600 - 1,120 mg/g, Biochemical oxygen demand, 5 d

Dissolved organic carbon (DOC) : no data available

Chemical Oxygen Demand (COD) : 1,420 mg/g

Adsorbed organic bound halogens (AOX) : no data available

sulphuric acid :

Biochemical Oxygen Demand (BOD) : no data available

Dissolved organic carbon (DOC) : no data available

Chemical Oxygen Demand (COD) : no data available

Adsorbed organic bound halogens (AOX) : no data available

AFB III Blue

No ingredients are hazardous according to OHSA criteria.

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13. Disposal considerations

13.1 Waste treatment methods

Product	: Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

14. Transport information

14.1 UN number

DOT	: 3316
IMDG	: 3316
IATA	: 3316

14.2 Proper shipping name

DOT	: Chemical kits
IMDG	: Chemical kit
IATA	: Chemical kit

14.3 Transport hazard class

DOT	: 9
IMDG	: 9
IATA	: 9

14.4 Packing group

DOT	
Packaging group	: II
Labels	: 9
Tunnel restriction code	: packed
IMDG	
Packaging group	: II
Labels	: 9
EmS Number	: F-A, S-P
IATA_C	
Packing instruction (cargo aircraft)	: 960
Packaging group	: II
Labels	: 9
IATA_P	
Packing instruction (passenger aircraft)	: 960

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Packaging group : II
Labels : 9

14.5 Environmental hazards

DOT
Environmentally hazardous : no

IMDG
Marine Pollutant : no

IATA
Environmentally hazardous : no

14.6 Special precautions for user

no data available

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

Remarks : not applicable

15. Regulatory information

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

AFB Stain REGULATORY INFORMATION

TSCA list : Listed

(a) List of substances. The following chemical substances are subject to all the provisions of part 716. Manufacturers, importers, and processors of a listed substance are subject to the reporting requirements of subpart A for that substance.

OSHA Hazards : Toxic by inhalation.
Toxic by ingestion
Toxic by skin absorption
Carcinogen
Mutagen

WHMIS Classification : B3 Combustible Liquid
Combustible Liquid
D1B Toxic Material Causing Immediate and Serious Toxic Effects
Toxic by ingestion
D2A Very Toxic Material Causing Other Toxic Effects
Toxic by skin absorption
D2B Toxic Material Causing Other Toxic Effects
Toxic by inhalation.

Carcinogen

Mutagen

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This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

CERCLA Reportable Quantity

Components : phenol 1000 lbs

SARA 302 Reportable Quantity

Product : Calculated RQ exceeds reasonably attainable upper limit.

Components : phenol

SARA 311/312 Hazards : Acute Health Hazard
Chronic Health Hazard

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 302 : The following components are subject to reporting levels established by SARA Title III, Section 302:

Components : phenol

SARA 304 : Calculated RQ exceeds reasonably attainable upper limit.

Components : phenol

Components : phenol

Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

phenol 9 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMi Intermediate or Final VOC's (40 CFR 60.489):

ethanol 30 %

phenol 9 %

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

phenol

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

phenol



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US State Regulations

Massachusetts Right To Know

Components	:	ethanol	30 - 50 %
		phenol	5 - 10 %
		4,4'-(4-iminocyclohexa-2,5-dienylidenemethylene)dianiline hydrochloride	0.1 - 1 %

Pennsylvania Right To Know

Components	:	water	50 - 70 %
		ethanol	30 - 50 %
		phenol	5 - 10 %

New Jersey Right To Know

Components	:	water	50 - 70 %
		ethanol	30 - 50 %
		phenol	5 - 10 %
		4,4'-(4-iminocyclohexa-2,5-dienylidenemethylene)dianiline hydrochloride	0.1 - 1 %

California Prop 65 Components	:	WARNING! This product contains a chemical known to the State of California to cause cancer. 4,4'-(4-iminocyclohexa-2,5-dienylidenemethylene)dianiline hydrochloride
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AFB Decolorizer II REGULATORY INFORMATION

OSHA Hazards	:	Flammable liquid Highly toxic by inhalation Carcinogen
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WHMIS Classification	:	B2 Flammable liquid Flammable liquid D1A Very Toxic Material Causing Immediate and Serious Toxic Effects Highly toxic by inhalation D2A Very Toxic Material Causing Other Toxic Effects Carcinogen E Corrosive Material Corrosive to metals Corrosive to skin Corrosive to eyes
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This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

CERCLA Reportable Quantity

Components	:	<u>methanol</u>	5000 lbs
		<u>methanol</u>	5000 lbs

SARA 302 Reportable Quantity

Product : Calculated RQ exceeds reasonably attainable upper limit.

Components	:	<u>sulphuric acid</u>
		Fire Hazard
		Acute Health Hazard
		Chronic Health Hazard

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 302 : The following components are subject to reporting levels established by SARA Title III, Section 302:

Components : sulphuric acid

SARA 304 : Calculated RQ exceeds reasonably attainable upper limit.

Components : sulphuric acid

Components : methanol

Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

methanol 64 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMi Intermediate or Final VOC's (40 CFR 60.489):

methanol 64 %

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

US State Regulations

Massachusetts Right To Know

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Components : methanol 50 - 70 %
 sulphuric acid 5 - 10 %

Pennsylvania Right To Know

Components	:	methanol	50 - 70 %
		water	10 - 30 %
		sulphuric acid	5 - 10 %

New Jersey Right To Know

Components	:	methanol	50 - 70 %
		water	10 - 30 %
		sulphuric acid	5 - 10 %

California Prop 65 Components : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

AFB III Blue

REGULATORY INFORMATION

OSHA Hazards : No OSHA Hazards

WHMIS Classification : Not Rated

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

CERCLA Reportable Quantity

Components : acetic acid 5000 lbs

SARA 302 Reportable Quantity

Product : This material does not contain any components with a SARA 302 RQ.

No SARA Hazards

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 304 : This material does not contain any components with a section 304 EHS RQ.



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Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMi Intermediate or Final VOC's (40 CFR 60.489):

acetic acid 0.25 %

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Components	: water	90 - 100 %
	acetic acid	0.1 - 1 %

New Jersey Right To Know

Components	: water	90 - 100 %
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California Prop 65 Components : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

16. Other information

Full text of R-phrases referred to under sections 2 and 3

Full text of H-Statements referred to under sections 2 and 3.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a



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guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.