







## LAM011 MAKOLOR EXTRA - Bruno scuro universale - Dark brown concentrated stain

Safety Data Sheet dated 7/10/2023, version 2

#### 1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name: MAKOLOR EXTRA - Bruno scuro universale - Dark brown

concentrated stain

Other means of identification:

Trade code: LAM011

Recommended use of the chemical and restrictions on use

Recommended use: IS- Industrial use PW - Professional use

Dve

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company:

SIVAM Coatings S.p.A - Via Monviso, 10 - 20008 BAREGGIO (MI) - Tel. +39 02 903041 Importer:

Richelieu America Itd, 7021 Sterling Ponds Blvd, Sterling Heights, MI 48312-5809 U.S. Tel: +1-800-361-6000.

Emergency phone number for U.S.A.: Chemtrec +1-800-424-9300

Distributor:

Richelieu America Itd, 7021 Sterling Ponds Blvd, Sterling Heights, MI 48312-5809 U.S. Tel: +1-800-361-6000.

Emergency phone number for U.S.A.: Chemtrec +1-800-424-9300

Competent person responsible for the safety data sheet:

msds@sivam.it

Emergency phone number:

SIVAM Coatings S.p.A - Tel. +39 02- 903041

Poison Centre - Ospedale di Niguarda Ca' Granda - Milan - Tel. +39 02-66101029 (24 h)

#### 2. HAZARD(S) IDENTIFICATION

Classification of the chemical

- Warning, Flam. Liq. 3, Flammable liquid and vapour.
- Warning, Eye Irrit. 2A, Causes serious eye irritation.
- ◆ Warning, Skin Sens. 1, May cause an allergic skin reaction.
- Danger, Repr. 1B, May damage fertility or the unborn child.
- ◆ Warning, STOT SE 3, May cause drowsiness or dizziness.

Label elements

Hazard pictograms:



Danger

Hazard statements:

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H360 May damage fertility or the unborn child.

H336 May cause drowsiness or dizziness.

Precautionary statements:

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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.

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.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash ... Thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing must not be allowed out of the workplace.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable 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.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P312 Call a POISON CENTER/doctor/... if you feel unwell.

P321 Specific treatment (see ... On this label).

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

P370+P378 In case of fire, use alcool resistant foam, dry chemical, CO2, water spray. Do not use water jet.

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.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Hazards not otherwise classified identified during the classification process:

None

Ingredient(s) with unknown acute toxicity:

None.

Additional classification information

NFPA rating:



HMIS rating:



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#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

N.A.

Mixtures

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

Qty	Name	Ident. Number		Classification
>= 40% - < 50%	1-methoxy-2-propanol; monopropylene glycol methyl ether	Index number: CAS: EC: REACH No.:	107-98-2 203-539-1	<ul><li>♠ B.6/3 Flam. Liq. 3 H226</li><li>♠ A.8/3 STOT SE 3 H336</li></ul>
>= 20% - < 25%	Acid Brown 355	CAS: EC: REACH No.:	84989-26-4 284-915-2 01- 2120077343 -57	
>= 15% - < 20%	2-(2-butoxyethoxy) ethanol; diethylene glycol monobutyl ether	Index number: CAS: EC: REACH No.:	112-34-5 203-961-6	◆ A.3/2A Eye Irrit. 2A H319
>= 0.1% - < 0.25%	2-methoxypropanol	Index number: CAS: EC:	603-106-00-0 1589-47-5 216-455-5	<ul> <li>♠ B.6/3 Flam. Liq. 3 H226</li> <li>♠ A.7/1B Repr. 1B H360</li> <li>♠ A.8/3 STOT SE 3 H335</li> <li>♠ A.2/2 Skin Irrit. 2 H315</li> <li>♠ A.3/1 Eye Dam. 1 H318</li> </ul>

#### 4. FIRST-AID MEASURES

Description of necessary measures

In case of skin contact:

Immediately take off all contaminated clothing.

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time,

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then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

Most important symptoms/effects, acute and delayed

None

Indication of immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

#### 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

In case of fire, use alcool resistant foam, dry chemical, CO2, water spray. Do not use water jet.

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products:

None

Explosive properties: N.D. in volume

Oxidizing properties: N.D.

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into

Move undamaged containers from immediate hazard area if it can be done safely.

#### **6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment, and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Remove persons to safety.

See protective measures under point 7 and 8.

Methods and materials for containment and cleaning up

Wash with plenty of water.

#### 7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Exercise the greatest care when handling or opening the container.

Do not use on extensive surface areas in premises where there are occupants.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

Conditions for safe storage, including any incompatibilities

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Always keep in a well ventilated place.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Avoid accumulating electrostatic charge.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

Safety electric system.

Storage temperature:

Store at ambient temperature.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

EU - TWA(8h): 375 mg/m3, 100 ppm - STEL: 563 mg/m3, 150 ppm - Notes: Skin

ACGIH - TWA(8h): 50 ppm - STEL: 100 ppm - Notes: A4 - Eye and URT irr

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether - CAS: 112-34-5

EU - TWA(8h): 67.5 mg/m3, 10 ppm - STEL: 101.2 mg/m3, 15 ppm

ACGIH - TWA(8h): 10 ppm - Notes: (IFV) - Hematologic, liver and kidney eff

**DNEL Exposure Limit Values** 

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

Worker Industry: 553.5 mg/m3 - Worker Professional: 553.5 mg/m3 - Exposure: Human

Inhalation - Frequency: Short Term, systemic effects

Worker Industry: 369 mg/m3 - Worker Professional: 369 mg/m3 - Consumer: 43.9 -

Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 183 mg/kg - Worker Professional: 183 mg/kg - Consumer: 78 mg/kg -

Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 33 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Acid Brown 355 - CAS: 84989-26-4

Worker Industry: 0.51 mg/m3 - Worker Professional: 0.51 mg/m3 - Consumer: 0.12 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects Worker Industry: 0.36 mg/m3 - Worker Professional: 0.36 mg/m3 - Consumer: 0.18 mg/m3 - Exposure: Human Dermal - Frequency: Long Term, systemic effects Consumer: 0.04 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether - CAS: 112-34-5

Worker Industry: 101.2 mg/m3 - Worker Professional: 101.2 mg/m3 - Consumer: 60.7 mg/m3 - Exposure: Human Inhalation - Frequency: Short Term, local effects Worker Industry: 67.5 mg/m3 - Worker Professional: 67.5 mg/m3 - Consumer: 40.5

mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, local effects Worker Industry: 83 mg/kg - Worker Professional: 83 mg/kg - Consumer: 50 mg/kg -

Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 5 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

**PNEC Exposure Limit Values** 

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

Target: Fresh Water - Value: 10 mg/l Target: Marine water - Value: 1 mg/l

Target: Intermittent emission - Value: 100 mg/l

Target: Freshwater sediments - Value: 52.3 mg/kg

Target: Marine water sediments - Value: 5.2 mg/kg

Target: Soil (agricultural) - Value: 4.59 mg/kg

Target: Microorganisms in sewage treatments - Value: 100 mg/l

Acid Brown 355 - CAS: 84989-26-4

Target: Fresh Water - Value: 0.01 mg/l Target: Marine water - Value: 0.001 mg/l

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Target: Freshwater sediments - Value: 0.038 mg/kg Target: Marine water sediments - Value: 0.038 mg/l Target: Intermittent emission - Value: 0.1 mg/l

Target: Microorganisms in sewage treatments - Value: 10 mg/l

Target: Soil (agricultural) - Value: 0.0017 mg/kg

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether - CAS: 112-34-5

Target: Fresh Water - Value: 1.1 mg/l Target: Marine water - Value: 0.11 mg/l

Target: Freshwater sediments - Value: 4.4 mg/kg Target: Marine water sediments - Value: 0.44 mg/kg

Target: Microorganisms in sewage treatments - Value: 200 mg/l

Target: Soil (agricultural) - Value: 0.32 mg/kg

Target: Food chain - Value: 56 mg/kg

Appropriate engineering controls:

None

Individual protection measures

Eve protection:

Eye glasses with side protection. (EN166)

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber. (EN374)

Respiratory protection:

Use adequate protective respiratory equipment.

Thermal Hazards:

None

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour: Liquid, Dark brown

Odour: typical
Odour threshold: N.D.
pH: 8.5
Melting point / freezing point: N.D. °C

Initial boiling point and boiling range: > 100 °C

Solid/gas flammability: N.A.

Upper/lower flammability or explosive limits: N.D.

Vapour density: > 1

Flash point: > 30 °C

Evaporation rate: N.D.

Vapour pressure: N.D. (20 °C)

Relative density: 1.040 - 1.060

Solubility in water: soluble

Solubility in oil: partial

Partition coefficient (n-octanol/water): N.D.
Auto-ignition temperature: 225 °C
Decomposition temperature: N.D. °C
Viscosity: N.D.
Miscibility: N.D.
Fat Solubility: N.D.
Conductivity: N.D.

Substance Groups relevant properties N.A.

#### 10. STABILITY AND REACTIVITY

Reactivity

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It may generate dangerous reactions (See subsections below)

Chemical stability

It may generate dangerous reactions (See subsections below)

Possibility of hazardous reactions

It may generate flammable gases on contact with elementary metals (alkalis and alkaline earth), nitrides, and powerful reducing agents.

It may catch fire on contact with oxidising mineral acids, elementary metals (alkalis and alkaline earth), nitrides, organic peroxides and hydroperoxides, oxidising agents, and reducing agents.

Conditions to avoid

Avoid accumulating electrostatic charge.

Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

Hazardous decomposition products

None.

#### 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicological information of the product:

MAKOLOR EXTRA - Bruno scuro universale - Dark brown concentrated stain

a) acute toxicity

Not classified

No data available for the product

b) skin corrosion/irritation

Not classified

No data available for the product

c) serious eye damage/irritation

The product is classified: Eye Irrit. 2A H319

d) respiratory or skin sensitisation

The product is classified: Skin Sens. 1 H317

e) germ cell mutagenicity

Not classified

No data available for the product

f) carcinogenicity

Not classified

No data available for the product

g) reproductive toxicity

The product is classified: Repr. 1B H360

h) STOT-single exposure

The product is classified: STOT SE 3 H336

i) STOT-repeated exposure

Not classified

No data available for the product

j) aspiration hazard

Not classified

No data available for the product

Toxicological information of the main substances found in the product:

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 3739 mg/kg

Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 30 mg/l - Duration: 4h

Acid Brown 355 - CAS: 84989-26-4

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 5792 mg/kg - Source: OECD 401

Test: LD50 - Route: Skin - Species: Rat > 5000 mg/kg - Source: OECD 402

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether - CAS: 112-34-5



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## LAM011 MAKOLOR EXTRA - Bruno scuro universale - Dark brown concentrated stain

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 2410 mg/kg - Source: OCSE 401 Test: LD50 - Route: Skin - Species: Rabbit = 2764 mg/kg - Source: OCSE 402

Substance(s) listed on the NTP report on Carcinogens:

None.

Substance(s) listed on the IARC Monographs:

None.

Substance(s) listed as OSHA Carcinogen(s):

None.

Substance(s) listed as NIOSH Carcinogen(s):

None.

#### 12. ECOLOGICAL INFORMATION

**Ecotoxicity** 

Adopt good working practices, so that the product is not released into the environment.

MAKOLOR EXTRA - Bruno scuro universale - Dark brown concentrated stain

Not classified for environmental hazards

No data available for the product

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Daphnia > 21000 mg/l - Duration h: 48 Endpoint: LC50 - Species: Fish = 6812 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae > 1000 mg/l - Duration h: 96

Acid Brown 355 - CAS: 84989-26-4

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48 Endpoint: LC50 - Species: Fish = 40 mg/l - Duration h: 96 Endpoint: EC50 - Species: Algae = 22.7 mg/l - Duration h: 168

Persistence and degradability

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

Biodegradability: Readily biodegradable - Duration h: 28 days - %: 96 - Notes: OECD

301E

Acid Brown 355 - CAS: 84989-26-4

Biodegradability: Non-readily biodegradable - Duration h: 28 days - %: 0 2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether - CAS: 112-34-5

Biodegradability: Readily biodegradable - Duration h: 28 days - %: 90 - Notes: OECD TG

301 C

Bioaccumulative potential

N.A.

Mobility in soil

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether - CAS: 112-34-5

Mobility in soil: Mobile

Other adverse effects

None

#### 13. DISPOSAL CONSIDERATIONS

Waste treatment and disposal methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

#### 14. TRANSPORT INFORMATION

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**UN** number

ADR-UN Number: 1263

DOT number: UN1263

IATA-UN Number: 1263 IMDG-UN Number: 1263

UN proper shipping name

ADR-Shipping Name: PAINT RELATED MATERIAL

DOT-Shipping Name: Paint including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base or Paint related material including paint thinning,

drying, removing, or reducing compound

IATA-Shipping Name: PAINT RELATED MATERIAL IMDG-Shipping Name: PAINT RELATED MATERIAL

Transport hazard class(es)

ADR-Class: 3

DOT Hazard Class: 3

ADR - Hazard identification number: 30

IATA-Class: 3
IATA-Label: 3
IMDG-Class: 3
IMDG-Class: 3

Packing group

ADR-Packing Group: III
DOT Packing group: III

IATA-Packing group: III
IMDG-Packing group: III

Environmental hazards

ADR-Enviromental Pollutant: No IMDG-Marine pollutant: No

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

N.A.

Special precautions

Rail (RID): 3

DOT Special provisions: 367, B1, B52, B131, IB3, T2, TP1, TP29

ADR-Subsidiary hazards:

ADR-S.P.: 163 367 650

ADR-Transport category (Tunnel restriction code): 3 (D/E)

IATA-Passenger Aircraft: 355
IATA-Subsidiary hazards: IATA-Cargo Aircraft: 366

IATA-S.P.: A3 A72 A192

IATA-ERG: 3L
IMDG-EmS: F-E , S-E

IMDG-Subsidiary hazards:

IMDG-Stowage and handling: Category A

IMDG-Segregation: -

#### 15. REGULATORY INFORMATION

USA - Federal regulations

TSCA - Toxic Substances Control Act

TSCA inventory: all the components are listed on the TSCA inventory.

TSCA listed substances:

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1-methoxy-2-propanol; monopropylene glycol methyl ether is listed in TSCA Section 8b, Section 8d HSDR

Acid Brown 355 is listed in TSCA Section 8b

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether is listed in TSCA Section 8b 2-methoxypropanol is listed in TSCA Section 8b.

SARA - Superfund Amendments and Reauthorization Act

Section 302 – Extremely Hazardous Substances: no substances listed.

Section 304 – Hazardous substances: no substances listed.

Section 313 – Toxic chemical list: no substances listed.

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act No substances listed.

CAA - Clean Air Act

CAA listed substances:

1-methoxy-2-propanol; monopropylene glycol methyl ether is listed in CAA Section 112(b) - HON >= 40% - < 50%

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether is listed in CAA Section 111, Section 112(b) - HON, Section 112(b) - HAP >= 15% - < 20%.

CWA - Clean Water Act

CWA listed substances:

None.

#### USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

None.

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

1-methoxy-2-propanol; monopropylene glycol methyl ether.

New Jersey Right to know

Substance(s) listed under New Jersey Right to know:

1-methoxy-2-propanol; monopropylene glycol methyl ether.

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

1-methoxy-2-propanol; monopropylene glycol methyl ether.

Volatile Organic compounds - VOCs = 76.00 % Volatile Organic compounds - VOCs = 807.12 g/l Volatile CMR substances = 0.11 % Organic Carbon - C = 0.41

### **16. OTHER INFORMATION**

Full text of phrases referred to in Section 3:

H226 Flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

H319 Causes serious eye irritation.

H360 May damage fertility or the unborn child.

H335 May cause respiratory irritation.

H315 Causes skin irritation.

H318 Causes serious eye damage.

Safety Data Sheet dated 7/10/2023, version 2 Sections modified from the previous revision:

2. HAZARD(S) IDENTIFICATION

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## LAM011 MAKOLOR EXTRA - Bruno scuro universale - Dark brown concentrated stain

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- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- SECTION 14: Transport information
- 15. REGULATORY INFORMATION

#### Disclaimer:

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. The information relates only to the specific material and may not be valid for such material used in combination with any other material or in any process.

This Safety Data Sheet cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of

Dangerous Goods by Road.

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

CAS: Chemical Abstracts Service (division of the American Chemical

Society).

CLP: Classification, Labeling, Packaging.

DNEL: Derived No Effect Level.

EINECS: European Inventory of Existing Commercial Chemical Substances.
GHS: Globally Harmonized System of Classification and Labeling of

Chemicals.

HMIS: Hazardous Materials Identification System IARC: International Agency for Research on Cancer IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport

Association" (IATA).

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization"

(ICAO).

IMDG: International Maritime Code for Dangerous Goods. INCI: International Nomenclature of Cosmetic Ingredients.

KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PNEC: Predicted No Effect Concentration.

RID: Regulation Concerning the International Transport of Dangerous Goods

by Rail.

STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWA: Time-weighted average