SAFETY DATA SHEETS

This SDS packet was issued with item: 074561643

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

074561007 074561015 074561023 074561031 074561049 074561056 074561064 074561072 074561080 074561098 074561106 074561114 074561122 074561130 074561148 074561205 074561213 074561221 074561239 074561247 074561254 074561262 074561270 074561288 074561296 074561304 074561312 074561320 074561338 074561346 074561411 074561429 074561437 074561445 074561452 074561460 074561478 074561486 074561494 074561502 074561510 074561528 074561536 074561544 074561551 074561569 074561577 074561585 074561593 074561601 074561619 074561627 074561635 074561650 074561668 074561676 074561684 075461007 075461411

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Safety Data Sheet acc. to OSHA HCS

Printing date 08/04/2015 Reviewed on 08/04/2015 1 Identification · Product identifier Trade name: Venus Diamond · Relevant identified uses of the substance or mixture and uses advised against No further relevant information available. Application of the substance / the mixture Dental filling material · Details of the supplier of the safety data sheet Manufacturer/Supplier: Heraeus Kulzer GmbH Grüner Weg 11, D-63450 Hanau Tel.: 0800 4372522 · Information department: Marc Henn Tel. +1 (574) 2995444 / Fax: +1 (574) 2912542 e-mail: marc.henn@kulzer-dental.com · Emergency telephone number: Emergencý CONTACT (24-Hour-Number) GBK/Infotrac ID 105860: (domestic) 1 800 535 5053 or international (001) 352 323 3500 2 Hazard(s) identification Classification of the substance or mixture Skin Sens. 1 H317 May cause an allergic skin reaction. · Label elements GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS). · Hazard pictograms GHS07 · Signal word Warning · Hazard-determining components of labeling: 2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5 -diyl)bis(methyleneiminocarbonyloxy-2,1-ethanediyl) ester triethylenglycoldimethacrylate Hazard statements May cause an allergic skin reaction. Precautionary statements Avoid breathing dust/fume/gas/mist/vapors/spray Wear protective gloves. Specific treatment (see on this label). Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Dispose of contents/container in accordance with local/regional/national/international regulations. · Classification system • NFPA ratings for USA (scale 0-4) Health = 0 Fire = 1Reactivity = 0 (Contd. on page 2) USA

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Safety Data Sheet acc. to OSHA HCS

Printing date 08/04/2015	Reviewed on 08/04/2
Trade name: Venus Diamond	
HMIS-Ratings (Scale 0-4) HEALTH I Health = 0 Fire = 1 Reactivity = 0	(Contd. of pag
• Results of PBT and vPvB assessment • PBT: Not applicable. • vPvB: Not applicable.	
3 Composition/information on ingredients	S
 Chemical characterization: Mixtures Description: - 	
Dangerous components:	
861437-11-8 2-Propenoic acid, (octahydro bis(methyleneiminocarbonyloxy-2,1-	ethanediyl) ester
109-16-0 triethylenglycoldimethacrylate Additional information For the wording of the	0-59 listed risk phrases refer to section 16.
 Description of first aid measures After inhalation Supply fresh air; consult docto After skin contact Immediately wash with wate After eye contact Rinse opened eye for severa After swallowing	er and soap and rinse thoroughly. I minutes under running water. In the source and delayed
5 Fire-fighting measures	
 Extinguishing media Suitable extinguishing agents CO2, extinguishing powder or water spray. Figle foam. Use fire fighting measures that suit the environm Special hazards arising from the substance or respective of the formation of toxic gases is possible during heating Advice for firefighters Protective equipment: No special measures responses Additional information - 	nent. nixture or in case of fire.
6 Accidental release measures	
6 Accidental release measures Personal precautions, protective equipment and Environmental precautions: Dilute with plenty of	

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Safety Data Sheet acc. to OSHA HCS

Printing date 08/04/2015

Reviewed on 08/04/2015

Trade name: Venus Diamond

(Contd. of page 2)

• Methods and material for containment and cleaning up:

Absorb with liquid binding material (diatomite, universal binders, for small amounts tissues). Send for recovery or disposal in suitable receptacles.

Reference to other sections

See Section 7 for information on safe handling See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

See Section 13 for disposal information

7 Handling and storage

·Handling

Precautions for safe handling

Please observe the additional instructions in the product's instructions for use.

· Information about protection against explosions and fires: No special measures required.

· Conditions for safe storage, including any incompatibilities

· Storage

- · Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

· Control parameters

· Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls

Personal protective equipment

- General protective and hygienic measures
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

If skin contact cannot be avoided, protective gloves are recommended to

avoid possible sensitization.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact gloves made of the following materials are suitable: Natural rubber, NR

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Safety Data Sheet acc. to OSHA HCS

Printing date 08/04/2015

Reviewed on 08/04/2015

(Contd. of page 3)

Trade name: Venus Diamond

• Eye protection: Safety glasses • Body protection: Light weight protective clothing

Information on basic physical and cl General Information Appearance:	hemical properties
Form: Color:	Pasty White Yellowish
• Odor: • Odour threshold:	Odorless Not determined.
· pH-value:	Not determined.
Change in condition Melting point/Melting range: Boiling point/Boiling range:	undetermined undetermined
Flash point:	> 165 °C (> 329 °F)
· Flammability (solid, gaseous)	Not applicable.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
• Explosion limits: • Lower: • Upper:	Not determined. Not determined.
· Vapor pressure:	Not determined.
 Density at 20 °C (68 °F): Relative density Vapour density Evaporation rate 	2.23 g/cm ³ (18.609 lbs/gal) Not determined. Not determined. Not determined.
Solubility in / Miscibility with Water:	Not miscible or difficult to mix
· Partition coefficient (n-octanol/wa	ater): Not determined.
 Viscosity: dynamic: kinematic: Other information 	Not determined. Not determined. No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.
 Possibility of hazardous reactions No dangerous reactions known
 Conditions to avoid No further relevant information available.
 Incompatible materials: No further relevant information available.

- · Hazardous decomposition products: none

(Contd. on page 5) - USA

Safety Data Sheet acc. to OSHA HCS

Printing date 08/04/2015

Reviewed on 08/04/2015

LISA

Trade name: Venus Diamond (Contd. of page 4) · Additional information: -11 Toxicological information Information on toxicological effects Acute toxicity: Primary irritant effect: · on the skin: No irritant effect. • on the eye: No irritating effect. • Sensitization: Sensitization possible through skin contact. · Additional toxicological information: Irritant · Carcinogenic categories IARC (International Agency for Research on Cancer) 7631-86-9 silicon dioxide, chemically prepared 3 Butyl-hydroxy-toluol 3 NTP (National Toxicology Program) None of the ingredients is listed. **OSHA-Ca (Occupational Safety & Health Administration)** None of the ingredients is listed. 12 Ecological information · Toxicity · Aquatic toxicity: No further relevant information available. · Persistence and degradability No further relevant information available. · Behavior in environmental systems: Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. · Additional ecological information: General notes: Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Results of PBT and vPvB assessment PBT: Not applicable. · vPvB: Not applicable. Other adverse effects No further relevant information available. 13 Disposal considerations · Waste treatment methods Recommendation Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 14 Transport information **UN-Number** DOT, ADR, ADN, IMDG, IATA Void (Contd. on page 6)

Safety Data Sheet acc. to OSHA HCS

Printing date 08/04/2015

Reviewed on 08/04/2015

Trade name: Venus Diamond (Contd. of page 5) · UN proper shipping name · DOT, ADR, ADN, IMDG, IATA Void Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Void Class · Packing group DOT, ADR, IMDG, IATA Void Environmental hazards: Marine pollutant: No Special precautions for user Not applicable. · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. · Transport/Additional information: -· UN "Model Regulation": -

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture · SARA Section 355 (extremely hazardous substances)

None of the ingredients is listed.

TSCA (Toxic Substances Control Act) Medical devices are exempted from TSCA.

· Cancerogenity categories

TLV (Threshold Limit Value established by ACGIH)

Butyl-hydroxy-toluol

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS). Hazard pictograms



· Signal word Warning

- · Hazard-determining components of labeling: 2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5 -diyl)bis(methyleneiminocarbonyloxy-2,1-ethanediyl) ester triethylenglycoldimethacrylate · Hazard statements
- May cause an allergic skin reaction.
- · Precautionary statements
- Avoid breathing dust/fume/gas/mist/vapors/spray Wear protective gloves.
- Specific treatment (see on this label).
- Wash contaminated clothing before reuse.
- If skin irritation or rash occurs: Get medical advice/attention.

Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 7) USA

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Safety Data Sheet acc. to OSHA HCS

Printing date 08/04/2015

Reviewed on 08/04/2015

Trade name: Venus Diamond

(Contd. of page 6) Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Date of preparation / last revision 08/04/2015 / -

Abbreviations and acronyms:

 Abbreviations and acronyms:
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the
 International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative vPvB: very Persistent and very Bioaccumulative Skin Sens. 1: Sensitisation - Skin, Hazard Category 1 •* Data compared to the previous version altered. USA

Heraeus Kulzer Mitsul Chemicals Group

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Safety Data Sheet acc. to OSHA HCS

1 Identification	
· Product identifier	
· Trade name: VENUS Pearl	
 Relevant identified uses of the substance or mixture and No further relevant information available. 	l uses advised against
· Application of the substance / the mixture Dental filling	g material
 Details of the supplier of the safety data sheet Manufacturer/Supplier: Heraeus Kulzer GmbH Grüner Weg 11, D-63450 Hanau 	Tel.: 0800 4372522
 Information department: Marc Henn Tel. +1 (574) 2995444 / Fax: +1 (574) 2912542 e-mail: marc.henn@kulzer-dental.com Emergency telephone number: Emergency CONTACT (24-Hour-Number) GBK/Infotrac ID 105860: (domestic) 1 800 535 5053 or inter 	national (001) 352 323 3500
2 Hazard(s) identification	
Classification of the substance or mixture Skin Sens. 1 H317 May cause an allergic skin reaction.	
The product is classified and labeled according to the Glo · Hazard pictograms	bally Harmonized System (GHS).
The product is classified and labeled according to the Glo • Hazard pictograms GHS07	bbally Harmonized System (GHS).
· Hazard pictograms	bally Harmonized System (GHS).
Hazard pictograms	-5 -diyl)bis(methyleneiminocarbonyloxy- on/face protection.
 Hazard pictograms Wazard pictograms GHS07 Signal word Warning Hazard-determining components of labeling: 2-Propenoic acid, (octahydro-4,7-methano-1H-indene 2,1-ethanediyl) ester Hazard statements May cause an allergic skin reaction. Precautionary statements Avoid breathing dust/fume/gas/mist/vapours/spray. Wear protective gloves/protective clothing/eye protecti Specific treatment (see on this label). Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attee Dispose of contents/container in accordance with regulations. Classification system NFPA ratings for USA (scale 0-4) Health = 0 Fire = 1 	-5 -diyl)bis(methyleneiminocarbonyloxy- on/face protection.
 Hazard pictograms Wazard pictograms GHS07 Signal word Warning Hazard-determining components of labeling: 2-Propenoic acid, (octahydro-4,7-methano-1H-indene 2,1-ethanediyl) ester Hazard statements May cause an allergic skin reaction. Precautionary statements Avoid breathing dust/fume/gas/mist/vapours/spray. Wear protective gloves/protective clothing/eye protecti Specific treatment (see on this label). Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attee Dispose of contents/container in accordance with regulations. Classification system NFPA ratings for USA (scale 0-4) 	-5 -diyl)bis(methyleneiminocarbonyloxy- on/face protection.

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Safety Data Sheet acc. to OSHA HCS

Printing date 05/12/2015

Reviewed on 05/12/2015

Trade name: VENUS Pearl

(Contd. of page 1)

 HMIS-Ratings (Scale 0-4)

 HEALTH
 0

 FIRE
 1

 HEALTH
 0

 FIRE
 1

 REACTIVITY
 0

 Reactivity
 = 0

• Results of PBT and vPvB assessment • PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

Description: -

Dangerous components:

 861437-11-8
 2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5 -diyl) bis(methyleneiminocarbonyloxy-2,1-ethanediyl) ester
 10-25%

 Butyl-hydroxy-toluol
 < 1%</td>

4 First-aid measures

· Description of first aid measures

After inhalation Supply fresh air; consult doctor in case of complaints.
 After skin contact

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· After eye contact

- Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing
- Rinse out mouth and then drink plenty of water.
- If symptoms persist consult doctor.
- Most important symptoms and effects, both acute and delayed
- No further relevant information available.
- Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

· Extinguishing media

- Suitable extinguishing agents
- Use fire fighting measures that suit the environment.

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · Special hazards arising from the substance or mixture
- Formation of toxic gases is possible during heating or in case of fire.
- Advice for firefighters
 - Protective equipment: No special measures required.
 - · Additional information -

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.

(Contd. on page 3)

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Safety Data Sheet acc. to OSHA HCS

Printing date 05/12/2015

Reviewed on 05/12/2015

Trade name: VENUS Pearl

(Contd. of page 2)

· Environmental precautions:

- Do not allow to enter sewers/ surface or ground water.
- Do not allow to penetrate the ground/soil.
- · Methods and material for containment and cleaning up:
- Absorb with liquid binding material (diatomite, universal binders, for small amounts tissues).
- Dispose of the collected material according to regulations.
- · Reference to other sections
- See Section 7 for information on safe handling
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

7 Handling and storage

Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.
 Information about protection against explosions and fires: No special measures required.

- · Conditions for safe storage, including any incompatibilities
 - Storage
 - · Requirements to be met by storerooms and receptacles: No special requirements.
 - Information about storage in one common storage facility: Not required.
 - Further information about storage conditions: None.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
 - Personal protective equipment
 - General protective and hygienic measures
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - · Breathing equipment: Not required.
 - Protection of hands:
 - If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.
 - For the permanent contact gloves made of the following materials are suitable: Natural rubber, NR
 - · Eye protection: Not absolutely necessary.
 - · Body protection: Light weight protective clothing

9 Physical and chemical properties

Information on basic physical and chemical properties
 General Information
 Appearance:

· Form: · Color: · Odor:

Pasty Different according to coloring Odorless

(Contd. on page 4)

USA

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Safety Data Sheet acc. to OSHA HCS

Printing date 05/12/2015

Reviewed on 05/12/2015

Trade name: VENUS Pearl

		(Contd. of page 3
· pH-value:	Not determined.	
 Change in condition Melting point/Melting in Boiling point/Boiling r 	range: undetermined ange: > 250 °C (> 482 °F)	
· Flash point:	> 165 °C (> 329 °F)	
Ignition temperature:		
· Decomposition tempe	rature: Not determined.	
· Auto igniting:	Product is not selfigniting.	
· Danger of explosion:	Product does not present an explosion hazard.	
· Density at 20 °C (68 °F):	2.1 g/cm³ (17.525 lbs/gal)	
Solubility in / Miscibility Water:	vith Not miscible or difficult to mix	
 · Viscosity: · dynamic: · kinematic: · Other information 	Not determined. Not determined. No further relevant information available.	

10 Stability and reactivity

- · Possibility of hazardous reactions No dangerous reactions known
- Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: none
 - Additional information:

11 Toxicological information

Information on toxicological effects

- Acute toxicity: Primary irritant effect:
 - on the skin: No irritant effect.
 - · on the eye: No irritating effect.
- · Additional toxicological information:

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

· Toxicity

Aquatic toxicity: No further relevant information available.

· Persistence and degradability No further relevant information available.

· Bioaccumulative potential No further relevant information available.

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Printing date 05/12/2015

Reviewed on 05/12/2015

Trade name: VENUS Pearl

(Contd. of page 4)

Mobility in soil No further relevant information available.
 Additional ecological information:

 General notes: Avoid transfer into the environment.

 Results of PBT and vPvB assessment

 PBT: Not applicable.
 vPvB: Not applicable.

· Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation

Small quantities can be polymerized by light and the cured solid material can be disposed of with the regular garbage. Larger quantities must be disposed of following the regulations of the local authorities.

Uncleaned packagings:

· Recommendation: Disposal must be made according to official regulations.

UN-Number		
· DOT, ADR, ADN, IMDG, IATA	Void	
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Void	
Transport hazard class(es)		
· DOT, ADR, ADN, IMDG, IATA · Class	Void	
Packing group • DOT, ADR, IMDG, IATA	Void	
Environmental hazards: • Marine pollutant:	No	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex MARPOL73/78 and the IBC Code	r II of Not applicable.	
· Transport/Additional information:		
UN "Model Regulation":		

15 Regulatory information • Safety, health and environmental regulations/legislation specific for the substance or mixture • SARA Section 355 (extremely hazardous substances) None of the ingredients is listed. • TSCA (Toxic Substances Control Act) Medical devices are exempted from TSCA. • Cancerogenity categories • TLV (Threshold Limit Value established by ACGIH) None of the ingredients is listed.

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US/

Safety Data Sheet acc. to OSHA HCS

Printing date 05/12/2015

Reviewed on 05/12/2015

Trade name: VENUS Pearl (Contd. of page 5) · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS). Hazard pictograms GHS07 · Signal word Warning · Hazard-determining components of labeling: 2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5 -diyl)bis(methyleneiminocarbonyloxy-2,1-ethanediyl) ester · Hazard statements May cause an allergic skin reaction. · Precautionary statements Avoid breathing dust/fume/gas/mist/vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection. Specific treatment (see on this label). Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Dispose of contents/container in accordance with local/regional/national/international regulations. · Chemical safety assessment: A Chemical Safety Assessment has not been carried out. 16 Other information These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Date of preparation / last revision 05/12/2015 / -Abbreviations and acronyms: ADDreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EUNECS: European Inventor of Eventor of Severnmental Chemical Substances ACGIH: American Conterence of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) Skin Sens. 1: Sensitisation - Skin, Hazard Category 1 * Data compared to the previous version altered.