

SAFETY DATA SHEETS

This SDS packet was issued with item:

071883990

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

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**DENTSPLY/International
DENTSPLY/Caulk
Safety Data Sheet**

568890

1. Product and Company Identification

Product Name Xeno[®] IV One Component Self Etching Dental Adhesive	SDS Code Number 568890
Trade Name & Synonyms Xeno[®] IV One Component Self Etching Dental Adhesive	Date of Last Revision 02/02/11
Manufacturer: DENTSPLY Caulk	Address 38 West Clarke Avenue Milford DE 19963-1805 http://www.caulk.com
Grades or Minor Variant Identities Not Applicable	Information Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)
Product Use (for Canada) Dental Bonding Agent	Emergency Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)

2. Hazard(s) Identification



Warning
Highly Flammable Liquid and Vapour



Warning
Causes Skin Irritation

Keep away from heat/sparks/open flames / hot surfaces.

No smoking.

Keep container tightly closed.

Wear protective gloves/eye protection/face protection.

Ground / Bond container and receiving equipment.

Use explosion-proof electrical lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

IF ON SKIN or Hair: Remove / take off immediately all contaminated clothing. Rinse skin with water / shower.

In case of fire: Use CO₂ sand or extinguishing powder.

Wash hands thoroughly after handling.

Wear protective gloves

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

If skin irritation occurs: Get Medical Advice/attention.

Take off contaminated clothing and wash before reuse.

3. Composition/Information on Ingredients

Hazardous Components	C.A.S. Number	Exposure Limits	%
Acetone	67-64-1	500 ppm	< 50
Urethane Dimethacrylate Resin	105883-40-7	Not Applicable	< 15
Dipentaerythritol pentaacrylate phosphate	87699-25-0	Not Applicable	< 15
Polymerizeable dimethacrylate resin	1709-71-3	Not Applicable	< 10
Polymerizeable trimethacrylate resin	3290-92-4	Not Applicable	< 10
Polymerizeable dimethacrylate resin	868-77-9	Not Applicable	< 10

4. First Aid Measures

Routes of Exposure	First Aid Instructions	Immediate Medical Attention	Delayed Effects
Eye	Rinse opened eye for several minutes under running water. If symptoms persist consult physician.	Not Applicable	Not Applicable
Skin	Immediately wash with soap and water and rinse thoroughly	Not Applicable	Not Applicable
Inhalation	Supply fresh air	Not Applicable	Not Applicable
Ingestion	If symptoms persist consult physician	Not Applicable	Not Applicable
Other	Not Applicable	Not Applicable	Not Applicable
Note to Physicians (Treating, Testing and Monitoring): Treat symptomatically.			

5. Fire and Explosion Data

Flashpoint Method: 2°C (36°F) Pensky-Marten Closed Cup	Flammable (Explosive) Limits in Air LEL: 2.5 vol. % UEL: 12.8 vol. %	Autoignition Temperature: Not Applicable	Other: Not Applicable
Flame Propagation or Burning Rate (for Solids): Not Applicable	Properties Contributing to Fire Intensity: Not Applicable	Flammability Classification: 3	
Extinguishing Media: CO ₂ , sand or extinguishing powder.		Extinguishing Media to Avoid: Do not use water or water with full jet.	
Protection and Procedures for Firefighters: Firefighters should wear self-contained respiratory protective devices.			
Unusual Fire and Explosion Hazards: Formation of toxic gases is possible during heating or in case of fire.			

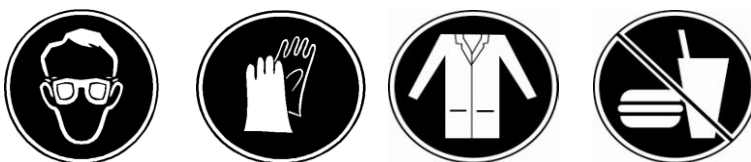
6. Accidental Release Measures

Containment Techniques: Wear protective clothing. Absorb with liquid binding material (sand, vermiculite, diatomite, acid binders, universal binders or sawdust). Scoop up bulk material and place in a labeled plastic or metal container.		
Spill/Leak Clean-up Procedures and Equipment: Wear protective clothing. Absorb with liquid binding material (sand, vermiculite, diatomite, acid binders, universal binders or sawdust). Scoop up bulk material and place in a labeled plastic or metal container. Avoid gross skin contact to minimize the possibility of contact dermatitis to susceptible persons. Ensure adequate ventilation.		
Evacuation Procedures: Not Applicable	Special Instructions: Not Applicable	Reporting Requirements: Not Applicable

7. Handling and Storage

Handling Practices and Warnings: Handling of this product should be by trained dental healthcare professionals only. Observe normal care for working with chemicals.
Storage Practices and Warnings: Store in a well-ventilated place. Keep cool. Store only in the original package. Keep package tightly sealed. Protect from exposure to direct light. Store away from food and beverages.

8. Exposure Control / Personal Protection



Ventilation: None required during normal intended use of this product		Other Engineering Controls: Not Applicable
Routes of Entry	Personal Protective Equipment (PPE) for Normal Use	PPE for Emergencies
Eye/Face	Safety Glasses	Not Applicable
Skin	The glove material has to be impermeable and resistant to the product.	Not Applicable
Inhalation	Not required for normal volumes used in Dental office.	Not Applicable
Body Protection	Protective work clothing	Not Applicable
General Hygiene Considerations and Work Practices: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at end of work. Avoid contact with the eyes and skin.		
Protective Measures During Repair and Maintenance of Contaminated Equipment: Not Applicable		
Other Protective Measures and Equipment: Not Applicable		

9. Physical and Chemical Characteristics

Appearance: Light yellow liquid.		Odor: Acetone like with characteristic sweet acrylic ester odor.	
Normal Physical State: Low viscosity liquid		Melting Point: Not Determined	Boiling Point: 57°C (135°F)
Specific Gravity: ~0.9 g/cm ³	Solubility in Water: Partially	pH: 2.5	
Vapor Pressure (mm Hg): Not Applicable	Vapor Density (AIR=1): Not Applicable	Evaporation Rate (Butyl Acetate=1): Not Applicable	
Other: Not Applicable			

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid): Visible light, high temperatures, strong acids, strong oxidizing agents.	
Hazardous Products Produced During Decomposition: Methacrylates, acrylates, carbon dioxide, carbon monoxide, peroxides and irritating gases.	
Hazardous Polymerization: <input type="checkbox"/> May Occur <input checked="" type="checkbox"/> May Not Occur	Conditions to Avoid: High Temperatures, ignition sources.
Stability? <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable	Conditions to Avoid: High Temperatures, ignition sources.

11. Toxicological Information

Emergency Overview: Material is flammable. Material is irritating to eyes, respiratory system and skin.					
Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data: Product is an irritant to skin and mucous membranes. The unpolymerized product may be an irritant to the skin in susceptible persons. On the eye the product has an irritating effect. Sensitization: Repeated or prolonged contact with the unpolymerized material may cause sensitization for persons allergic to acrylates and methacrylates. This product shows the following dangers according to internally approved calculation methods for composite materials: Irritant.					
Routes of Exposure	Signs and Symptoms	Single, Repeated, or Lifetime Exposure	Severity (Mild, Moderate, Severe)	Acute and Chronic Health Effect(s)	Target Organ(s)
Eye	Material can cause irritation.	Single	Moderate	Irritation and possible corneal damage	Yes
Skin	Material may be an irritant and may be absorbed through the skin.	Single & Repeated	Moderate	Irritation or possible allergic response. Severe allergic response may result	Yes

				in breathing difficulties.	
Inhalation	Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma.	Repeated	Moderate	Chronic inhalation may cause effects similar to those of acute inhalation. Causes respiratory tract irritation. May cause motor incoordination and speech abnormalities.	Yes
Ingestion	May cause irritation of the digestive tract.	Single & Repeated	Mild	Not Applicable	No
Other: Central nervous system	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Medical Conditions Aggravated by Exposure: Open sores and wounds of the skin. Individuals with known sensitivity to methacrylates, acrylates, or urethane dimethacrylate resin used in Dental restorative products.					
Carcinogenicity NTP?: Not listed IARC monographs?: Not listed OSHA regulated?: No. All components of this product are in compliance with the inventory listing Requirements of the U. S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.					
Potential Environmental Effects Do not allow to enter sewers/ surface or ground water.					
NFPA Hazard Classification Ratings (Scale 0-4) Health = 2, Fire = 3, Reactivity = 0 Specific Hazard = None					

12. Ecological Information

Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Harmful to fish. Harmful to aquatic organisms.

13. Disposal Considerations

Regulations: Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of material as solid waste in a closed container. Dispose of in accordance with Federal, State and Local regulations

Properties (Physical/Chemical) Affecting Disposal: Dispose of material as solid waste in a closed container.

RCRA P-Series: None Listed, RCRA U-Series CAS#67-64-1: Waste Number U002 (Ignitable Waste)

14. Transport Information

Regulated for Shipping: Yes	Proper Shipping Name: Acetone Solution	Packing Group: II
Do Changes in Quantities, packaging, or shipment method change product classification? Yes	Hazard Class: 3	UN Identification Number: 1090
Other: Not Applicable		



Flammable Liquid

15. Regulatory Information

This product has been classified in accordance with the hazard criteria of the Globally Harmonized System of Classification and Labeling of Chemicals and the SDS contains all of the information required by the Canadian Controlled Products Regulations.
U.S. Federal Regulations: CERCLA 103 Reportable Quantity: RQ is 5,000 pounds (2268Kg) for CAS# 67-64-1 Acetone. Report spills required under federal, state and local regulations. Many states have more stringent release reporting requirements.
RCRA U-Series Hazardous Waste Code for CAS# 67-64-1 Acetone: U002
Section 313 Toxic Chemicals: This product does not contain any chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372).
Section 302 Extremely Hazardous Substances (TPQ): None
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.
U.S. State Regulations California Proposition 65: This product does not contain any chemicals, which are on the California Proposition 65 list.
Federal Regulations: The product has been classified and marked in accordance with directives on hazardous materials. Hazard Symbol: Flammable Water Hazard class1 (Self-assessment): slightly hazardous for water. SARA Codes: CAS # 67-64-1 Acute, chronic, flammable.
International Regulations: Hazard Symbol: Flammable XI F Risk Phrases: R11 Highly Flammable, R36/37/38 Irritating to Eyes, respiratory system and skin. R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R67 Vapors may cause drowsiness and dizziness. Safety Phrases: S9 Keep container in well-ventilated place. S16 Keep away from sources of ignition – No Smoking, S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice, S28 After contact with skin wash immediately with plenty of water, S61 Avoid release to the environment.
Other: Canada WHMIS for the acetone, classification of B2, D2B. Acetone CAS#67-64-1 is on the Canadian Ingredient Disclosure List.

16. Other Information

To the best of our knowledge this product does not contain gluten, wheat grains, flaxseed, natural rubber, or natural latex.

All components are synthetically produced; none are derived from animal products.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific products features and shall not establish a legally valid contractual relationship.

The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer. For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DFU.

**DENTSPLY/International
DENTSPLY/Caulk
Safety Data Sheet**

568890

1. Product and Company Identification

Product Name Xeno® IV One Component Self Etching Dental Adhesive	SDS Code Number 568890
Trade Name & Synonyms Xeno® IV One Component Self Etching Dental Adhesive	Date of Last Revision 11/12/13
Manufacturer: DENTSPLY Caulk	Address 38 West Clarke Avenue Milford DE 19963-1805 http://www.caulk.com
Grades or Minor Variant Identities Not Applicable	Information Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)
Product Use (for Canada) Dental Bonding Agent	Emergency Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)

2. Hazard(s) Identification



**Warning
Highly Flammable Liquid and Vapour**



**Warning
Causes Skin Irritation**

Keep away from heat/sparks/open flames / hot surfaces.

No smoking.

Keep container tightly closed.

Wear protective gloves/eye protection/face protection.

Ground / Bond container and receiving equipment.

Use explosion-proof electrical lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

IF ON SKIN or Hair: Remove / take off immediately all contaminated clothing. Rinse skin with water / shower.

In case of fire: Use CO₂ sand or extinguishing powder.

Wash hands thoroughly after handling.

Wear protective gloves

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

If skin irritation occurs: Get Medical Advice/attention.

Take off contaminated clothing and wash before reuse.

3. Composition/Information on Ingredients

Hazardous Components	C.A.S. Number	Exposure Limits	%
Acetone	67-64-1	500 ppm	< 50
Urethane Dimethacrylate Resin	105883-40-7	Not Applicable	< 15
Dipentaerythritol pentaacrylate phosphate	87699-25-0	Not Applicable	< 15
Polymerizeable dimethacrylate resin	1709-71-3	Not Applicable	< 10
Polymerizeable trimethacrylate resin	3290-92-4	Not Applicable	< 10
Polymerizeable dimethacrylate resin	868-77-9	Not Applicable	< 10

4. First Aid Measures

Routes of Exposure	First Aid Instructions	Immediate Medical Attention	Delayed Effects
Eye	Rinse opened eye for several minutes under running water. If symptoms persist consult physician.	Not Applicable	Not Applicable
Skin	Immediately wash with soap and water and rinse thoroughly	Not Applicable	Not Applicable
Inhalation	Supply fresh air	Not Applicable	Not Applicable
Ingestion	If symptoms persist consult physician	Not Applicable	Not Applicable
Other	Not Applicable	Not Applicable	Not Applicable
Note to Physicians (Treating, Testing and Monitoring): Treat symptomatically.			

5. Fire and Explosion Data

Flashpoint Method: 2°C (36°F) Pensky-Marten Closed Cup	Flammable (Explosive) Limits in Air LEL: 2.5 vol. % UEL: 12.8 vol. %	Autoignition Temperature: Not Applicable	Other: Not Applicable
Flame Propagation or Burning Rate (for Solids): Not Applicable	Properties Contributing to Fire Intensity: Not Applicable	Flammability Classification: 3	
Extinguishing Media: CO ₂ , sand or extinguishing powder.		Extinguishing Media to Avoid: Do not use water or water with full jet.	
Protection and Procedures for Firefighters: Firefighters should wear self-contained respiratory protective devices.			
Unusual Fire and Explosion Hazards: Formation of toxic gases is possible during heating or in case of fire.			

6. Accidental Release Measures

Containment Techniques: Wear protective clothing. Absorb with liquid binding material (sand, vermiculite, diatomite, acid binders, universal binders or sawdust). Scoop up bulk material and place in a labeled plastic or metal container.		
Spill/Leak Clean-up Procedures and Equipment: Wear protective clothing. Absorb with liquid binding material (sand, vermiculite, diatomite, acid binders, universal binders or sawdust). Scoop up bulk material and place in a labeled plastic or metal container. Avoid gross skin contact to minimize the possibility of contact dermatitis to susceptible persons. Ensure adequate ventilation.		
Evacuation Procedures: Not Applicable	Special Instructions: Not Applicable	Reporting Requirements: Not Applicable

7. Handling and Storage

Handling Practices and Warnings: Handling of this product should be by trained dental healthcare professionals only. Observe normal care for working with chemicals.
Storage Practices and Warnings: Store in a well-ventilated place. Keep cool. Store only in the original package. Keep package tightly sealed. Protect from exposure to direct light. Store away from food and beverages.

8. Exposure Control / Personal Protection



Ventilation: None required during normal intended use of this product		Other Engineering Controls: Not Applicable
Routes of Entry	Personal Protective Equipment (PPE) for Normal Use	PPE for Emergencies
Eye/Face	Safety Glasses	Not Applicable
Skin	The glove material has to be impermeable and resistant to the product.	Not Applicable
Inhalation	Not required for normal volumes used in Dental office.	Not Applicable
Body Protection	Protective work clothing	Not Applicable
General Hygiene Considerations and Work Practices: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at end of work. Avoid contact with the eyes and skin.		
Protective Measures During Repair and Maintenance of Contaminated Equipment: Not Applicable		
Other Protective Measures and Equipment: Not Applicable		

9. Physical and Chemical Characteristics

Appearance: Light yellow liquid.		Odor: Acetone like with characteristic sweet acrylic ester odor.	
Normal Physical State: Low viscosity liquid		Melting Point: Not Determined	Boiling Point: 57°C (135°F)
Specific Gravity: ~0.9 g/cm ³	Solubility in Water: Partially	pH: 2.5	
Vapor Pressure (mm Hg): Not Applicable	Vapor Density (AIR=1): Not Applicable	Evaporation Rate (Butyl Acetate=1): Not Applicable	
Other: Not Applicable			

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid): Visible light, high temperatures, strong acids, strong oxidizing agents.	
Hazardous Products Produced During Decomposition: Methacrylates, acrylates, carbon dioxide, carbon monoxide, peroxides and irritating gases.	
Hazardous Polymerization: <input type="checkbox"/> May Occur <input checked="" type="checkbox"/> May Not Occur	Conditions to Avoid: High Temperatures, ignition sources.
Stability? <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable	Conditions to Avoid: High Temperatures, ignition sources.

11. Toxicological Information

Emergency Overview: Material is flammable. Material is irritating to eyes, respiratory system and skin.					
Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data: Product is an irritant to skin and mucous membranes. The unpolymerized product may be an irritant to the skin in susceptible persons. On the eye the product has an irritating effect. Sensitization: Repeated or prolonged contact with the unpolymerized material may cause sensitization for persons allergic to acrylates and methacrylates. This product shows the following dangers according to internally approved calculation methods for composite materials: Irritant.					
Routes of Exposure	Signs and Symptoms	Single, Repeated, or Lifetime Exposure	Severity (Mild, Moderate, Severe)	Acute and Chronic Health Effect(s)	Target Organ(s)
Eye	Material can cause irritation.	Single	Moderate	Irritation and possible corneal damage	Yes
Skin	Material may be an irritant and may be absorbed through the skin.	Single & Repeated	Moderate	Irritation or possible allergic response. Severe allergic response may result	Yes

				in breathing difficulties.	
Inhalation	Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma.	Repeated	Moderate	Chronic inhalation may cause effects similar to those of acute inhalation. Causes respiratory tract irritation. May cause motor incoordination and speech abnormalities.	Yes
Ingestion	May cause irritation of the digestive tract.	Single & Repeated	Mild	Not Applicable	No
Other: Central nervous system	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Medical Conditions Aggravated by Exposure: Open sores and wounds of the skin. Individuals with known sensitivity to methacrylates, acrylates, or urethane dimethacrylate resin used in Dental restorative products.					
Carcinogenicity NTP?: Not listed IARC monographs?: Not listed OSHA regulated?: No. All components of this product are in compliance with the inventory listing Requirements of the U. S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.					
Potential Environmental Effects Do not allow to enter sewers/ surface or ground water.					
NFPA Hazard Classification Ratings (Scale 0-4) Health = 2, Fire = 3, Reactivity = 0 Specific Hazard = None					

12. Ecological Information

Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Harmful to fish. Harmful to aquatic organisms.

13. Disposal Considerations

Regulations: Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of material as solid waste in a closed container. Dispose of in accordance with Federal, State and Local regulations

Properties (Physical/Chemical) Affecting Disposal: Dispose of material as solid waste in a closed container.

RCRA P-Series: None Listed, RCRA U-Series CAS#67-64-1: Waste Number U002 (Ignitable Waste)

14. Transport Information

Regulated for Shipping: Yes	Proper Shipping Name: Acetone Solution	Packing Group: II
Do Changes in Quantities, packaging, or shipment method change product classification? Yes	Hazard Class: 3	UN Identification Number: 1090
Other: Not Applicable		



Flammable Liquid

15. Regulatory Information

This product has been classified in accordance with the hazard criteria of the Globally Harmonized System of Classification and Labeling of Chemicals and the SDS contains all of the information required by the Canadian Controlled Products Regulations.
U.S. Federal Regulations: CERCLA 103 Reportable Quantity: RQ is 5,000 pounds (2268Kg) for CAS# 67-64-1 Acetone. Report spills required under federal, state and local regulations. Many states have more stringent release reporting requirements.
RCRA U-Series Hazardous Waste Code for CAS# 67-64-1 Acetone: U002
Section 313 Toxic Chemicals: This product does not contain any chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372).
Section 302 Extremely Hazardous Substances (TPQ): None
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.
U.S. State Regulations California Proposition 65: This product does not contain any chemicals, which are on the California Proposition 65 list.
Federal Regulations: The product has been classified and marked in accordance with directives on hazardous materials. Hazard Symbol: Flammable Water Hazard class1 (Self-assessment): slightly hazardous for water. SARA Codes: CAS # 67-64-1 Acute, chronic, flammable.
International Regulations: Hazard Symbol: Flammable XI F Risk Phrases: R11 Highly Flammable, R36/37/38 Irritating to Eyes, respiratory system and skin. R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R67 Vapors may cause drowsiness and dizziness. Safety Phrases: S9 Keep container in well-ventilated place. S16 Keep away from sources of ignition – No Smoking, S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice, S28 After contact with skin wash immediately with plenty of water, S61 Avoid release to the environment.
Other: Canada WHMIS for the acetone, classification of B2, D2B. Acetone CAS#67-64-1 is on the Canadian Ingredient Disclosure List.

16. Other Information

To the best of our knowledge this product does not contain gluten, wheat grains, flaxseed, natural rubber, or natural latex.

All components are synthetically produced; none are derived from animal products.

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The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer. For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DFU.