



## **SAFETY DATA SHEET**

**Safety Data Sheet according to Reg. (EU) No 453/2010**

### **DSS CRYSTAL CAST - HARDENER**

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Product name : DSS Crystal Cast (Hardener)

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DSS Decorative Surface Systemes (France) encourages and expects you to read and understand the entire SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

## SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

<b>1.1 Product identifier</b>	Product name : DSS CRYSTAL CAST (Hardener)
<b>1.2 Relevant identified uses of the substance or mixture and uses advised against</b>	Used in applications such as: Curing agent.
<b>1.3 Details of the supplier of the safety data sheet</b>	DECORATIVE SURFACES SYSTEMES, ZAC de l'Église, bâtiment C, 5003 rue Principal, 60120 LE CROCQ, FRANCE. Tel : +33631555344 Fixe : +33986732401 info@dssfrance.fr
<b>1.4 EMERGENCY TELEPHONE NUMBER</b>	Centre régional antipoison PARIS Tél. : 33-140054848

## SECTION 2. HAZARDS IDENTIFICATION

<b>2.1 Classification of the substance or mixture</b>	
<b>Classification according to Regulation (EC) No 1272/2008:</b>	<b>Classification according to EU Directives 67/548/EEC or 1999/45/EC:</b>
Acute toxicity - Category 4 - Oral - H302 Skin corrosion - Category 1B - H314 Skin sensitisation - Category 1 - H317 Chronic aquatic toxicity - Category 3 - H412	Corrosive - C - R34 Harmful - Xn - R20/21/22 Irritant - R43 R52/53

<b>2.2 Label éléments</b>	
<b>Labelling according to Regulation (EC) No 1272/2008:</b>	
<b>Hazard pictograms</b>	
<b>Signal word:</b>	DANGER

<b>Hazard statements</b>
H302+312 Harmful if swallowed or in contact with skin. H318 Causes serious eye damage. H411 Toxic to aquatic life with long lasting effects.

<b>Precautionary statements</b>
<p>P264 Wash skin thoroughly after handling.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 Immediately call a POISON CENTER or doctor/ physician.</p> <p>P391 Collect spillage.</p>

<b>Contains</b>
Propylidynetrimethanol, propoxylated, reaction products with ammonia

<b>2.3 Other hazards</b>
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>3.1 Mixtures</b>			
This product is a mixture.			
CAS Number	REACH / Registration/ Number	Component	Concentration
39423-51-3	01-2119514687-32	Propylidynetrimethanol, propoxylated, reaction products with ammonia	>= 90 - < 100 %

## SECTION 4. FIRST AID MEASURES

<b>4.1 Description of first aid measures</b>	
<b>General advice</b>	Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. Treat symptomatically. Get medical attention if symptom occur.
<b>Inhalation:</b>	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
<b>Skin contact:</b>	If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
<b>Eye contact:</b>	Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
<b>Ingestion:</b>	Keep respiratory tract clear. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

<b>4.2 Most important symptoms and effects, both acute and delayed:</b>
None known.

<b>4.3 Indication of any immediate medical attention and special treatment needed</b>	
Treatment : Treat symptomatically.	

## SECTION 5. FIREFIGHTING MEASURES

<b>5.1 Extinguishing media</b>	
<b>Suitable extinguishing media:</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media:</b>	High volume water jet.

<b>5.2 Special hazards arising from the substance or mixture</b>	
<b>Hazardous combustion products</b>	Carbon oxides
<b>Unusual Fire and Explosion Hazards</b>	Do not allow run-off from fire fighting to enter drains or water courses.

<b>5.3 Advice for firefighters</b>	
<b>Further information:</b>	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.
<b>Special protective equipment for firefighters:</b>	In the event of fire, wear self-contained breathing apparatus.
<b>Specific extinguishing methods:</b>	No data is available on the product itself.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

<b>6.1 Personal precautions, protective equipment and emergency procedures:</b>	Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.
<b>6.2 Environmental precautions:</b>	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
<b>6.3 Methods and materials for containment and cleaning up:</b>	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.
<b>6.4 Reference to other sections:</b>	For disposal considerations see section 13., See Section 1 for emergency contact information., For personal protection see section 8.

## SECTION 7. HANDLING AND STORAGE

<b>7.1 Precautions for safe handling:</b>	Advice on safe handling: Do not breathe vapours/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations. Advice on protection against fire and explosion: Normal measures for preventive fire protection.
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	Hygiene measures: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
<b>7.2 Conditions for safe storage, including any incompatibilities:</b>	Requirements for storage areas and containers: Keep container tightly closed in a dry and well-ventilate place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers. Advice on common storage: For incompatible materials please refer to Section 10 of this SDS. Further information on storage stability: Stable under normal conditions.
<b>7.3 Specific end use(s) Specific use(s)</b>	See Annex to the Safety data sheet for additional information in the Exposure Scenario(s).

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>8.1 Control parameters</b>				
<b>Exposure limits are listed below, if they exist.</b>				
<b>Substance name</b>	<b>End Use</b>	<b>Exposure routes</b>	<b>Potential health</b>	<b>Value/Notation</b>
Propylidynetrime ethanol , propoxylated, reaction products with ammonia	Workers	Inhalation	Long-term systemic effects	14,1 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	1,6 mg/kg bw/day
<b>Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:</b>				
Substance name	Environmental Compartment	Value		
Propylidynetrime ethanol, propoxylated, reaction products with ammonia	Fresh water	0,004 mg/l		
	Intermittent use/release	0,044 mg/l		
	Marine water	0 mg/l		
	Fresh water sediment	0,022 mg/kg dry weight (d.w.)		
	Marine sediment	0,002 mg/kg dry weight (d.w.)		
	Sewage treatment plant	10 mg/l		
	Soil	0,002 mg/kg dry weight (d.w.)		

<b>8.2 Exposure controls</b>	
<b>Engineering controls:</b>	Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.
<b>Individual protection measures</b>	
<b>Eye/face protection:</b>	Eye wash bottle with pure water. Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
<b>Skin protection</b>	
<b>Hand protection:</b>	Use chemical resistant gloves classified under Standard EN374: F739 (US).
	Material: Polyvinyl Chloride (PVC)

	Break through time	> 6 h
	Material	Nitrile rubber
	Break through time	> 6 h
	Remarks	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	No personal respiratory protective equipment normally required.
	Protective measures	See Annex to the Safety data sheet for additional information in the Exposure Scenario(s).

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties Appearance	
Physical state	light yellow
Color	Colorless
Odor	ammoniacal
Odor Threshold	No data is available on the product itself
pH	11,6 Concentration: 50 g/l
Melting point/range	No information available
Freezing point	< -20 °C
Boiling point (760 mmHg)	No information available.
Flash point	closed cup 218,5 °C
Evaporation Rate (Butyl Acetate = 1)	No information available
Flammability (solid, gas)	Not applicable to liquids
Lower explosion limit	No information available
Upper explosion limit	No information available
Vapor Pressure	6,82 hPa (20 °C)
Relative Vapor Density (air = 1)	1
Relative Density (water = 1)	No data is available on the product itself
Density	0,9658 g/cm <sup>3</sup> (20 °C) Method: Relative Density
Water solubility	No information available
Partition coefficient: n-octanol/water	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Dynamic Viscosity	No information available
Kinematic Viscosity	110 mm <sup>2</sup> /s
Explosive properties	No information available
Oxidizing properties	No information available
9.2 Other information	
Molecular weight	No information available
Volatile Organic Compounds	385 g/L 2004/42/EC

## SECTION 10. STABILITY AND REACTIVITY

<b>10.1 Reactivity:</b>	No dangerous reaction known under conditions of normal use.
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<b>10.2 Chemical stability:</b>	Stable under recommended storage conditions. See Storage, Section 7.
<b>10.3 Possibility of hazardous reactions:</b>	No hazards to be specially mentioned.
<b>10.4 Conditions to avoid:</b>	None known.
<b>10.5 Incompatible materials:</b>	Strong acids.
<b>10.6 Hazardous decomposition products:</b>	carbon dioxide, carbon monoxide.

## SECTION 11. TOXICOLOGICAL INFORMATION

<b>Toxicological information on this product or its components appear in this section when such data is available.</b>	
<b>11.1 Information on toxicological effects</b>	
<b>Acute toxicity</b>	LD50 (Rat, female): 550 mg/kg
<b>Acute oral toxicity</b>	LD50 (Rat, female): 550 mg/kg. Method: OECD Test Guideline 425
<b>Acute dermal toxicity</b>	LD50 (Rat, male and female): > 1 000 mg/kg\ Method: OECD Test Guideline 402
<b>Acute inhalation toxicity</b>	No data available
<b>Skin corrosion/irritation</b>	Species: Rabbit Method: OECD Test Guideline 404 Result: Mild skin irritation Species: reconstructed human epidermis (RhE) Method: OECD Test Guideline 431 Result: No skin irritation
<b>Serious eye damage/eye irritation</b>	Method: OECD Test Guideline 405 Result: Irreversible effects on the eye
<b>Sensitization</b>	Propylidynetrimethanol, propoxylated, reaction products with ammonia: Exposure routes: Skin. Species: Guinea pig Assessment: Did not cause sensitisation on laboratory animals. Method: OECD Test Guideline 406 Result: Did not cause sensitisation on laboratory animals.
<b>Specific Target Organ Systemic Toxicity (Single Exposure)</b>	No data available
<b>Specific Target Organ Systemic Toxicity (Repeated Exposure)</b>	No data available
<b>Carcinogenicity</b>	Based on information for component(s): Did not cause cancer in laboratory animals.
<b>Teratogenicity</b>	Contains component(s) which, in laboratory animals, have been toxic to the fetus only at doses toxic to the mother. Contains component(s) which did not cause birth defects in laboratory animals.
<b>Reproductive toxicity</b>	Test Type: Reproduction / Developmental Toxicity Screening. Test Species: Rat, male and female Application Route: Dermal Dose: 0, 10, 50, 100 mg/kg General Toxicity - Parent: No observed adverse effect level: > 100 mg/kg body weight General Toxicity F1: No observed adverse effect level: > 100 mg/kg body weight Method: OECD Test Guideline 421 Result: No effects on fertility and early embryonic development were detected.
<b>Mutagenicity</b>	Test Type: reverse mutation assay. Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative
<b>Aspiration Hazard</b>	Based on physical properties, not likely to be an aspiration hazard.

## SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.	
12.1 Toxicity	
Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Test type: static test. Test substance: Fresh water. Method: OECD Test Guideline 203 GLP: yes.
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 13 mg/l Exposure time: 48 h Test Type: static test. Test substance: Fresh water Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants :	ErC50 (Selenastrum capricornutum (green algae)): 4,4 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water. Method: OECD Test Guideline 201 GLP: yes NOEC (Selenastrum capricornutum (green algae)): 1 mg/l Exposure time: 72 h Test Type: static test. Test substance: Fresh water Method: OECD Test Guideline 201 GLP: yes
Toxicity to microorganisms	EC50 (activated sludge): ca. 1 000 mg. Exposure time: 0,5 h. Test Type: static test. Test substance: Fresh water Method: OECD Test Guideline 209 GLP: yes

12.2 Persistence and degradability	
Test Type:	aerobic
Inoculum:	activated sludge
Result:	Not readily biodegradable. Biodegradation: < 5 %
Exposure time	28 d
Stability in water	
Degradation half life (DT50):	> 1 yr (25 °C)
pH	7,5
Method:	OECD Test Guideline 111 Remarks: Fresh water

12.3 Bioaccumulative potential	
Partition coefficient:	n-octanol/water: log Pow: -1,13 (20 - 25 °C),
pH	12,7
Method:	Partition coefficient

12.4 Mobility in soil	
No data available	

12.5 Results of PBT and vPvB assessment	
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.	

12.6 Other adverse effects	
Additional ecological information An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.	



## SECTION 13. DISPOSAL CONSIDERATIONS

<b>13.1 Waste treatment methods</b>	
The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Dispose of as hazardous waste in compliance with local and national regulations. Dispose of contents/ container to an approved waste disposal plant. Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.	

## SECTION 14. TRANSPORT INFORMATION

<b>IATA</b>	UN 3082
<b>14.1 UN number</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>14.2 UN proper shipping name</b>	(TRIMETHYLOLPROPANE POLYOXYPROPYLENE TRIAMINE)
<b>14.3 Transport hazard class(es)</b>	9
<b>14.4 Packing group</b>	III
<b>14.5 Environmentally hazardous</b>	Not considered environmentally hazardous based on available data.
<b>14.6 Special precautions for user IMDG</b>	No data available.
<b>14.1 UN number</b>	UN 3082
<b>14.2 UN proper shipping name</b>	Environmentally hazardous substance, liquid, n.o.s.
	(TRIMETHYLOLPROPANE POLYOXYPROPYLENE TRIAMINE)
<b>14.3 Transport hazard class(es)</b>	9
<b>14.4 Packing group</b>	III
<b>14.5 Environmental hazards</b>	Not considered as marine pollutant based on available data.
<b>14.6 Special precautions for user ADR / RID</b>	EmS: F-A, S-B
<b>14.1 UN number</b>	UN 3082
<b>14.2 UN proper shipping name</b>	Environmentally hazardous substance, liquid, n.o.s.
	(TRIMETHYLOLPROPANE POLYOXYPROPYLENE TRIAMINE)
<b>14.3 Transport hazard class(es)</b>	9
<b>14.4 Packing group</b>	III
<b>14.5 Environmental hazards</b>	Not considered environmentally hazardous based on available data.
<b>14.6 Special precautions for user</b>	Hazard Identification Number: 80
<b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable for product as supplied.

## SECTION 15. REGULATORY INFORMATION

<b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	
<b>REACH Regulation (EC) No 1907/2006</b>	This product contains only components that have been either pre-registered, registered, are exempt from registration, are regarded as registered or are

	not subject to registration according to Regulation (EC) No. 1907/2006 (REACH). The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.
<b>Seveso II - Directive 96/82/EC and its amendments:</b>	Listed in Regulation: Directive 96/82/EC does not apply
<b>15.2 Chemical Safety Assessment</b>	
Chemical Safety Assessments have been carried out for these substances.	

## SECTION 16. OTHER INFORMATION

The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE. IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE. THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST. THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST. Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

**DSS**