

# Nanocoating

KTV Group Nanocoating for betong og puss, er diffusjonsåpent og kan ikke skade underlaget.

## KTV Group Nanocoating for betong og puss, benyttes til påføring på betong eller puss.

Nanocoating kan også benyttes på malingsstyper som sillikatmaling eller andre uorganiske malinger. Produktet beskytter overflaten for vannintregning, og gjør overflaten selvrensende.

Produktet er diffusjonsåpent og kan ikke skade underlaget. Tvert i mot beskytter det mot skader for frostsprengning og armeringskader. Det er også mulig å overmale overflaten om man ønsker dette senere.

## Nanocoating og fjerning av NOx. Gir store fordeler i miljøregnskapet.

En «gjennomsnittlig EU bil» slipper ut 1,7 kg NOx i året. Det antas da 0,1 gram NOx pr km og kjørelengde på 17000 km pr år.  $0,1 \times 17000 = 1.700 \text{ gram} = 1,7 \text{ kg NOx}$ .

Laboratorietester viser at Nanocoatingen fjerner 83 gram NOx pr kvm pr år. For å fjerne 1,7 kg NOx, som altså er utslipp fra en gjennomsnittsbil, trenger man da ca 20,5 kvm med nanocoating. Kalkylen:  $83 \text{ gram} \times 20,5 \text{ kvm} = 1.702 \text{ gram NOx}$ . Dette under optimale lysforhold.

### BRUKERINFORMASJON:

Påføres med sprøyte eller rulle. Middelet skal legges tynt på. 1 liter dekker ca 10 m<sup>2</sup>.

Vær nøye med pålegging for å sikre best mulig resultat.

Legger man på for mye av middelet, kan det oppstå hvite sjolder.

Tørketid etter pålegging: 6 timer.  
Minimum temperatur 5 grader, og lav luftfuktighet.

Levetiden er fra 5-10 år, avhengig av type overflate.

Selvrensing virker best der sol og regn treffer overflaten. Selvrensingseffekt uteblir i områder der sollys ikke slipper til, som garasjer/tuneller. Dette kan løses med kunstig lys om nødvendig.

### INNHOLD:

Potassium methylsiliconate, Titanium dioxide, Ethanolamine hydrochloride. pH 12-14

### LAGRES FROSTFRITT

Lukkede beholdere, ikke utsettes for direkte sollys, 5-25 °C.

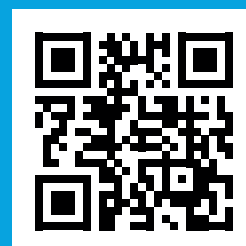
### HOLDBARHET:

24 måneder.

### DATABLAD/DATASHEET

Skann QR-kode eller gå til:  
[www.ktvgroup.no/datasheet](http://www.ktvgroup.no/datasheet)

Scan QR-code or go to:  
[www.ktvgroup.no/datasheet](http://www.ktvgroup.no/datasheet)



#### FARE:

Gir alvorlige etseskader på hud og øyne.  
Oppbevares utilgjengelig for barn. Må ikke komme i kontakt med øyne, huden eller klær.  
Benytt påkrevd verneutstyr

#### VED HUDKONTAKT (eller håret):

Tilsølte klær må fjernes straks.  
Skyll/dusj huden med vann.

#### VED KONTAKT MED ØYNE:

Skyll forsiktig med vann i flere minutter.  
Fjern eventuelle kontaktlinser dersom dette enkelt lar seg gjøre. Fortsett skyllingen.



UN 1719

# SAFETY DATA SHEET

KTV GROUP NANOCOATING FOR BETONG OG PUSS

## Joma Hydro-C63

Revision date: 27.03.2015

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

Chemical name Joma Hydro-C63  
Replace MSDS of 26.03.2015  
Version number 2.0

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

Uses of the chemical Photocatalytic self-cleaning and hydrophobic treatment of concrete, cement or stone.  
Uses advised against This product is not recommended for other uses than those specified above.

#### 1.3 Details of the supplier of the safety data sheet

Manufacturer Joma International AS  
Heiane 2b  
5131 Nyborg  
Norway  
Telefon: (+47) 41647393

E-mail andreas@joma-int.com

Responsible Joma International AS

Author Sensor Chemcontrol AS

#### 1.4 Emergency telephone number

Poison Information Centre: +47 22 59 13 00.

### 2. HAZARD IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Classification according to 1272/2008EC Skin Corr 1A; H314: Skin corrosion/irritation.

Classification according to 67/548/EEC and 1999/45/EC C; R35

#### 2.2 Label elements

Pictogram



Signal word Danger

Hazard statement(s) H314 Causes severe skin burns and eye damage.

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### Precautionary statements

<b>General</b>	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use.
<b>Prevention</b>	P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response</b>	P301+P330+P331 IF SWALLOWED: Rinse mouth; Do NOT induce vomiting. 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. P310 Immediately call a POISON CENTER or doctor/physician. P363 Wash contaminated clothing before reuse.
<b>Storage</b>	P405 Store locked up.
<b>Disposal</b>	P501 Dispose of contents/container to disposal facilities for hazardous waste.

### 2.3 Other hazards

The chemical does not meet the criteria for PBT or vPvB in accordance with REACH Annex XIII.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

Ingredients	Identification	Classification according to regulation		Weight%
		67/548/EEC, 1999/45/EC	1272/2008 (CLP)	
Potassium methylsiliconate	Ec/Nlp nr: 250-807-9 Cas nr: 31795-24-1	C; R35	Skin Corr 1A; H314	5-15
Titanium dioxide (anatase)	Ec/Nlp nr: 236-675-5 Cas nr: 13463-67-7	IK	Note:Z	5-15
Ethanolamine hydrochloride	Ec/Nlp nr: 217-900-6 Cas nr: 2002-24-6	Xi; R36/37	Skin Irrit 2; H315 Eye Irrit 2; H319 STOT SE 3; H335	< 2

### Explanation

C=Corrosive. Xi=Irritating. IK = Not classified.  
Eye Irrit 2: Serious eye damage/eye irritation.  
STOT SE 3: Specific target organ toxicity - single exposure.  
R-phrases with full text is found in section 16.

### Ingredients comments

The classification applies to each substance, not the product.  
All concentrations are listed as weight percent.

Note Z: Although the component is not classified as dangerous according to Regulation (EC) No 1272/2008, it provides valuable information to the product composition.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

<b>Inhalation</b>	Fresh air, warmth and rest, preferably in a comfortable, half-sitting position. If breathing stops, perform artificial respiration. If irritation and cough, contact a Poisons Information Centre for advice. Keep respiratory tract open.
<b>Skin contact</b>	Remove/take off contaminated clothing immediately. Rinse immediately with plenty of flowing lukewarm water for 30-60 minutes. If Diphoterine are on site, use this instead of water. Additional flushing may be applicable. Corrosive damage must be treated by a doctor.
<b>Eye contact</b>	Immediately call a POISON CENTER or physician. Start rinse immediately, do not delay the start of rinsing to find a specific rinse liquid. Rinse thoroughly also under the eyelids and remove powder residue. Remove any contact lenses. If Diphoterine are on site, use this instead of water. Continuous flushing for 30 minutes, preferably at the scene.
<b>Ingestion</b>	Seek medical advice immediately and show this container or label. Rinse mouth with water (only if the person is conscious). Drink 1-2 cups of water or milk in small sips. Activated charcoal should not be given.

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### Medical information

Treat chemical burns like burns.  
Ingestion of the product shall be treated as chemical burns.

### 4.2 Most important symptoms and effects, both acute and delayed

Inhalation of alkalis/bases can provide everything from mild irritation to burns in the respiratory tract, and severe impact on the lungs.  
Splashes in the eyes may cause pain. Redness, lacrimation, blurred vision may occur. At worst, alkalis in corrosive concentration cause permanent visual impairment or blindness.  
If swallowing corrosive alkalis, it may take time before injury and pain develop. Eventually burns in mouth, throat, esophagus and stomach may occur.  
If spilled on the skin it will first feel smooth and look strange. Pain, blistering and sores that resemble burns may later develop.

### 4.3 Indication of any immediate medical attention and special treatment needed

Swallowing of alkalis in corrosive concentrations should be followed up at the hospital as soon as possible.

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Water spray, foam, CO<sub>2</sub> or powder.

#### Extinguishing media which shall not be used

Avoid using directed water jets during extinguishing work.

### 5.2 Special hazards arising from the substance or mixture

Note that there is a danger of formation of poisonous gasses.

### 5.3 Advice for firefighters

n/a

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8.2 of the material safety data sheet. Containers with collected materials should be labeled carefully with the correct content. Do not get in eyes, on skin, or on clothing. Keep persons and animals away from contaminated area. Only trained personnel should perform the cleanup of spills. Wear suitable protective clothing.

### 6.2 Environmental precautions

Prevent spillage in larger quantities to sewer, waterway or ground.

### 6.3 Methods and material for containment and cleaning up

Collect small amounts with absorbent material.  
Absorb with suitable material, and deliver to nearest refuse disposal terminal.

### 6.4 Reference to other sections

See section 7 for information on safe handling. See section 8 for information on personal protection equipment. See section 12 for information on ecology. See section 13 for waste disposal.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Do not eat or drink while working with this product. Wear suitable protective clothing. Wear eye/face protection. Avoid contact with eyes, skin and clothes. Wear suitable gloves. Handle in accordance with good hygiene and safety practice. Operating instructions should be followed to ensure safe use and best results.

### 7.2 Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from food, drink and animal feeds.  
Should be stored standing and in original container.

### 7.3 Specific end use(s)

Photocatalytic self-cleaning and hydrophobic treatment of concrete, cement or stone.  
Sprayed in a very thin layer of the dispersion product on a dry, clean surface and allow to dry naturally.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

### 8.2 Exposure controls

#### Exposure controls

Common sense and safety precautions should always be used when handling chemicals. Ensure that all containers are properly labeled to prevent accidental ingestion or improper use. Ensure good working hygiene. Make use of recommended safety equipment. Provide adequate exhaust ventilation, or ventilation in the workplace. Avoid contact with eyes and skin.

#### Respiration protection

The European Committee for Standardisation (CEN) standards EN136, EN140 and EN405 specify respirator masks and EN149 and EN143 specify filter recommendations.

#### Eye protection

Wear approved eye protection. Eye protection shall be in accordance to EN 166 standard. Equipment for eye washing must be available, preferably also a shower.

#### Hand protection

Protective gloves of natural latex, nitrile, neoprene or PVC category 3 according to standard EN374-3 is recommended.  
All specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact

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the glove manufacturer for specific advice on glove selection and breakthrough times for your use. Check and possibly replace worn or damaged gloves. If contact with forearms is likely, wear gauntlet style. CE standards EN420 and EN374 provide general requirements and lists of glove types.

### Additional information

Norwegian Labour Inspection Authority has issued regulations on the use of personal protective equipment at work. Personal protective equipment shall meet the requirements set out in the regulations concerning construction formulation and production of personal protective equipment, issued by the Authority. It is good industrial hygiene practices to avoid skin contact as possible. Do not wear rings, watches, etc. which are suitable for keeping the product and thereby cause skin reactions. Barrier creams may help to protect exposed skin, but can not substitute for gloves. Remove contaminated clothing to prevent skin contact. After washing the skin apply oily skin cream to replace lost skin oils. Keep good order. Specific Hygiene Measures: Always observe good personal hygiene such as washing after handling product and before eating, drinking and / or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and shoes that can not be washed.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Form	Liquid.
Colour	White transparent
Odour	Odorless.
Smell limit	n/a
pH - conc.	12 - 14
Melting point	0 °C
Boiling point	100 °C
Flash point	n/a
Relative evaporation rate	n/a
Flammability (solid, gas)	n/a
Explosion limits	n/a
Vapour pressure	n/a
Vapour density	n/a
Specific gravity	1,1
Solubility	n/a
Solubility water	70% - miscible.
Partition coefficient n-octanol/water	n/a
Auto-ignition temp.	n/a
Decomposition temperature	n/a
Viscosity	< 100 cP
Explosive properties	n/a
Oxidising properties	n/a
9.2 Other information	n/a

## 10. STABILITY AND REACTIVITY

10.1 Reactivity	n/a
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	Never mix water directly into the product - this can lead to violent reaction.
10.4 Conditions to avoid	n/a
10.5 Incompatible materials	n/a
10.6 Hazardous decomposition products	n/a

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Acute toxicity	After ingestion of caustic alkali, it may take time before the injury and pain develops. Corrosive
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	effect on mucous membranes in mouth, gullet and stomach, and may cause severe pain. Ingestion can cause corrosive damage to mouth, throat and digestive system.
Skin corrosion/irritation	Causes severe burns to skin and eyes. Even diluted solutions can cause irritation. If spilled on the skin it will first feel smooth. Pain, blistering and sores that resemble burns later develops.
Serious eye damage/ irritation	Splash of concentrate or dilution in the eyes may cause serious damage. Splashes in the eyes may cause pain, but not always. May destroy the cornea.
Respiratory or skin sensitisation	None of the substances listed in section 3 is classified as allergenic.
Germ cell mutagenicity	None of the substances listed in section 3 is classified as mutagenic.
Carcinogenicity	None of the substances listed in section 3 is classified as carcinogenic.
Reproductive toxicity	None of the substances listed in section 3 is classified as reproduction toxic.
STOT-single exposure	Based on available data, no classification criteria are met.
STOT-repeated exposure	Based on available data, the criteria for classification are not fulfilled.
Aspiration hazard	Based on available data, no classification criteria are met.
Additional information	Probable route of exposure: Skin contact. Inhalation of dust or airborne particles.

## 12. ECOLOGICAL INFORMATION

12.1 Toxicity	Harmful to aquatic organisms due to high pH value. Toxic to fish and plankton. No eco-toxic effect known.
For ingredient LC50 Referens	<b>Titanium dioxide (anatase)</b> 5.5 mg/l (Crustaceans 48 hours) Lovern, S.B., and R. Klaper 2006. Daphnia magna Mortality when Exposed to Titanium Dioxide and Fullerene (C60) Nanoparticles. Environ.Toxicol.Chem. 25(4):1132-1137
12.2 Persistence and degradability	n/a
12.3 Bioaccumulative potential	No bio-accumulation is indicated. No harmful long-term effects are expected on aquatic organisms.
12.4 Mobility in soil	Soluble in water.
12.5 Results of PBT and vPvB assessment	This product is not itself and does not contain a PBT or vPvB. The chemical does not meet the criteria for PBT or vPvB in accordance with REACH Annex XIII.
12.6 Other adverse effects	Bases causing pH increase in the water, which can lead to fish death at the spill site. pH > 9 is harmful to fish.

## 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	
Disposal group	EWC: *06 10 02 waste containing dangerous substances. EWC: *06 02 05 other bases. EWC: *20 01 15 bases. The EWC code are for illustrative purposes only. Always check the waste codes in view of the current state the product is in. The final waste groups and tags must be determined by the user, based on the actual use of the product.
Packings	Contaminated packaging material should be treated equivalent to residual chemicals.
Additional information	The product shall not be allowed to enter drains, waterways or groundwater. Avoid contact with skin. Causes burns.

## 14. TRANSPORT INFORMATION

14.1 UN number	UN1719
14.2 UN proper shipping name	
Item name	Caustic alkali liquids, n.o.s.
14.3 Transport hazard class(es)	
Label	8
ADR/RID class	8
ADR/RID classification code	C5
ADR/RID danger number	80
14.4 Packing group	II: Intermediate hazardous substances.
14.5 Environmental hazards	n/a
14.6 Special precautions for user	Causes burns.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	n/a

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### 15. REGULATORY INFORMATION

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

Commission Regulation (EU) No 453/2010 Annex II (Appendix II - "II").  
European Parliament and Council Regulation (EC) 1272/2008.  
Regulations regarding OAR values.  
Transport of hazardous goods: ADR, RID, IMDG, IATA (2011).  
ECHA (European Chemicals Agency) C&L Inventory database.  
COMMISSION REGULATION (EU) No 944/2013 of 2 October 2013 (ATP5).  
Ex-ECB databasen (<http://esis.jrc.ec.europa.eu/index.php?PGM=cla>).  
Norwegian Waste Regulations (miljøverndepartementet) - FOR 2004-06-01 No. 930: Regulations relating to the recycling of waste.

#### 15.2 Chemical safety assessment

Supplier has not carried out a Chemical Safety Assessment for the substance or mixture.

#### Additional information

Classification of this product is given on the basis of the available information from the vendor.

### 16. OTHER INFORMATION

#### Relevant hazard- and risk phrases given in section 3

H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
R-35 Causes severe burns.  
R-36/37 Irritating to eyes and respiratory system.

#### Key literature references and sources for data

Material safety data sheet from the supplier.

#### Abbreviations in the document

N/a - No relevant information  
.  
EWC - European Waste Catalogue codes.  
VPvB - very Persistent and very Bioaccumulative (require special attention under REACH).  
PBT - Persistent, Bioaccumulative and Toxic.

#### First released

26.03.2015

#### Printed date

27.03.2015

#### Additional information

Revised and quality controlled by:  
Sensor Chemcontrol AS  
Storgata 30  
3611 Kongsberg  
Norway  
Tlf: +47 32 77 06 60  
E-mail: [helpdesk@sensor.as](mailto:helpdesk@sensor.as)  
URL: [www.sensor.as](http://www.sensor.as)

--- SAFETY DATA SHEET conforming to commission regulation 67/548/EEC, 1999/45/EC and (EU) No 453/2010 of 20. May 2010

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