1) IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

Commercial name: Norton Clipper Concrete Hardener Lithium

Use: Concrete sealer

Company Identification: Saint-Gobain
251 rue de l'Ambassadeur, 78700 Conflans, France
Tel: +33 (0)1 34 90 40 00 Fax: +33 (0)1 34 90 43 97
Web: www.nortonabrasives.com

2) HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Indications of danger: Xi - Irritant
R phrases: Irritating to skin.
Risk of serious damage to eyes.
May cause sensitisation by skin contact.

GHS classification
Hazard categories:

Skin corrosion/irritation:	Skin Irrit. 2
Serious eye damage/eye irritation:	Eye Dam. 1
Respiratory/skin sensitization:	Skin Sens. 1
Hazard Statements:	Causes skin irritation.

May cause an allergic skin reaction.
Causes serious eye damage.

2.2. Label elements

Pictograms: GHS05-GHS07

Signal word: Danger

Hazardous components which must be listed on the label
aminofunctional siloxane Potassium methylsilanetriolate

Hazard statements
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

Precautionary statements

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
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.

2.3. Other hazards

High risk of slipping due to leakage/spillage of product.

3) COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixtures

Chemical characterization
Aqueous preparation of the following substances with non-hazardous admixtures

Hazardous components

Chemical name	Quantity	Classification	GHS classification
EC No -- CAS no -- Index No -- REACH No --			
EC No 235-730-0 CAS no 12627-14-4 Index No -- REACH No 01-2119899248-18	< 10 %	Xi - Irritant R37-41	STOT SE 3, Eye Dam. 1; H335 H318
Potassium methylsilanetriolate EC No 250-807-9 CAS no 31795-24-1 Index No -- REACH No 01-2119517439-34	< 5 %	C - Corrosive	R35 Skin Corr. 1A; H314

Full text of R and H phrases: see Section 16.

4) FIRST AID MEASURES

4.1. Description of first aid measures

General information
Remove contaminated soaked clothing immediately.
If you feel unwell, seek medical advice.
No specific precautions required.

After inhalation
Take affected person into fresh air.
Wash mouth and nasal passages with water.
If symptoms develop, seek medical attention.

After contact with skin
In case of contact with skin wash off with soap and water.
Consult a doctor if skin irritation persists.

After contact with eyes
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lens.
Seek medical treatment by eye specialist.

After ingestion
Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.
Never give anything by mouth to an unconscious person.
Call a physician immediately.

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

Causes serious eye damage.
Causes skin irritation.
May cause an allergic skin reaction.

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

Treat symptoms.

5) FIRE-FIGHTING MEASURE

5.1. Extinguishing media

Suitable extinguishing media
Product does not burn, fire-extinguishing activities according to surrounding.
Foam, carbon dioxide (CO2), dry chemical, water-spray.

Extinguishing media which must not be used for safety reasons
Full water jet.

5.2. Special hazards arising from the substance or mixture

Fire may produce:
Hydrocarbons., Carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx).
Irritant/corrosive, flammable as well as toxic distillation gases/vapours.

5.3. Advice for firefighters

Use breathing apparatus with independent air supply.
Protective suit.

Additional information
Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

6) ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing.
Use personal protective clothing.
High risk of slipping due to leakage/spillage of product.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/ground water.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Shovel into suitable container for disposal.

6.4. Reference to other sections

Observe protective instructions (see Sections 7 and 8).
Information for disposal see section 13.

7) HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling
Avoid contact with the skin and the eyes.
Ensure adequate ventilation.

Advice on protection against fire and explosion
No special protective measures against fire required.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep container tightly closed in a dry, cool and well-ventilated place.
Keep away from heat.
Keep from freezing.

Advice on storage compatibility
Incompatible with strong acids and oxidizing agents.

Further information on storage conditions
Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Concrete sealer

8) EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1. Control parameters

8.2. Exposure controls

Protective and hygiene measures
Wash hands before breaks and at the end of workday.
Take off immediately all contaminated clothing.

Respiratory protection
No personal respiratory protective equipment normally required.

Hand protection
Neoprene, butyl or nitrile rubber gloves
Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Eye protection
Tightly fitting goggles (EN 166).
Eye wash bottle with pure water (EN 15154).

Skin protection
Long sleeved clothing (EN 368).

9) PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Transparent
Odour:	Soft

Test method

pH-Value (at 20 °C):	approx. 11

Changes in the physical state

Melting point:	approx. 0 °C
Boiling point:	approx. 100 °C
Flash point:	n.a.
Lower explosion limits:	n.a.
Upper explosion limits:	n.a.
Ignition temperature:	n.a.
Vapour pressure (at 20 °C):	approx. 22 hPa
Density (at 20 °C):	1,106 g/cm³
Water solubility (at 20 °C):	> 95 % g/L

10) STABILITY AND REACTIVITY

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactions with oxidizing agents. Strong exothermic reaction with acids.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

Strong acids and oxidizing agents.

10.6. Hazardous decomposition products

Fire may produce:
Hydrocarbons , Carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx).
Irritant/corrosive, flammable as well as toxic distillation gases (carbonization gases).

11) TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity
No toxicological data available.
aminofunctional siloxane
Acute inhalation toxicity ATE 1,5 mg/l

Irritation and corrosivity
Skin irritation: Irritant
Eye irritation: Causes serious eye damage.

Sensitising effects
May cause an allergic skin reaction.

Severe effects after repeated or prolonged exposure
STOT/Single exposure: Not classified.
STOT/Repeated exposure: Not classified.
Aspiration hazard: Not classified.

Carcinogenic/mutagenic/toxic effects for reproduction
Carcinogenicity: Not classified.
Mutagenicity: Not classified.
Reproductive toxicity: Not classified.

Additional information on tests
Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

Empirical data on effects on humans
Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance.

Further information
If appropriately handled and if in accordance with the general hygienic rules, no damages to health have become known.

12) ECOLOGICAL INFORMATION

12.1. Toxicity

Ecological data are not available.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

A pH-change becomes possible in water.
Low hazard to waters.

Further information
Do not flush into surface water or sanitary sewer system.

13) DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Advice on disposal
Can be landfilled after chemical and physical treatment, when in compliance with local regulations.
Where possible recycling is preferred to disposal.

Waste disposal number of waste from residues/unused products
080111 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS wastes from MFSU and removal of paint and varnish waste paint and varnish containing organic solvents or other dangerous substances Classified as hazardous waste.

Contaminated packaging
Empty containers should be taken for local recycling, recovery or waste disposal.
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.
Packaging that cannot be cleaned should be disposed of like the product.

14) TRANSPORT INFORMATION

Other applicable information
No hazardous material as defined by the transport regulations.

15) REGULATORY INFORMATION

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

EU regulatory information
1999/13/EC (VOC): 0 %

National regulatory information
Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

16) OTHER INFORMATION

Changes in chapter: 2, 3, 4, 11

Abbreviations and acronyms
ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
IMDG = International Maritime Code for Dangerous Goods
IATA/ICAO = International Air Transport Association / International Civil Aviation Organization MARPOL = International Convention for the Prevention of Pollution from Ships
IBC = Code International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
GHS = Globally Harmonized System of Classification and Labelling of Chemicals REACH = Registration, Evaluation, Authorization and Restriction of Chemicals CAS = Chemical Abstract Service
EN = European norm

ISO =	International Organization for Standardization
VOC =	Volatile organic compound
STOT SE =	Specific target organ toxicity single exposure STOT RE = Specific target organ toxicity repeated exposure PBT = Persistent Bioaccumulative and Toxic
vPvB =	Very Persistent and very Bio-accumulative bw = body weight
LD =	Lethal dose
LC =	Lethal concentration EC = Effect concentration
IC =	Median immobilisation concentration or median inhibitory concentration

Full text of R phrases referred to under Sections 2 and 3
20 Harmful by inhalation.
35 Causes severe burns.
37 Irritating to respiratory system. 38 Irritating to skin.
41 Risk of serious damage to eyes.
43 May cause sensitisation by skin contact.

Full text of H statements referred to under Sections 2 and 3
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

Further Information
Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.
The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.
The delivery specifications are contained in the corresponding product sheet.
This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.
(n.a. = not applicable; n.d. = not determined)

CONCRETE HARDNER LITHIUM

PRODUCT DESCRIPTION

Concrete Hardner Lithium is an easy-to-use water-based solution which requires no rinsing and is VOC compliant in all areas of the world. When sprayed on new or existing concrete, it penetrates up to ¼ inch (7mm) where it reacts with free calcium to form insoluble calcium silica hydrate, which makes the concrete more water, stain, and abrasion resistant for easier maintenance and longer life. It is also suitable for concrete polishing procedures and helps prolong the life of polished finishes.

KEY BENEFITS

- Protects against salt and freeze/thaw damage
- Easy-to-use, low odor, no rinsing required
- Not susceptible to UV damage
- Penetrates - no film to lift or peel off
- Reduces efflorescence and surface sweating
- Does not contribute to surface ASR* or promote crazing
- VOC Compliant, can contribute to LEED points (IEQ credit 4.2 non-emitting materials)
- Prolongs finish of polished surfaces
- Resists water, stains and dusting, making concrete and facilities easier to maintain

USES

NEW AND EXISTING CONCRETE BOTH INTERIOR AND EXTERIOR.

Commercial: Grocery Stores, Office Building, Retail, Banks, Malls, Warehouses ,distribution, supermarket etc.

Industrial: Food Processing Facilities, Cold Storage / Freezers, Beverage and manufacturing Plants

Institutional: Churches, Hospitals, Universities, Schools, Museums

Theme & Leisure: Resorts, Hotels, Casinos, Restaurants,

Residential: Concrete floors and Garages

APPLICATION

Precautions: Apply only when temperatures will be above 36º F 2ºC) for at least 4 hours following application. Clean surface to remove any dirt, laitance, curing compounds or coatings that may prevent Concrete Hardner Lithium from penetrating the surface. Do not use citrus or acidic cleaners. If acid dyes or cleaners have been used, neutralize the surface using an alkali cleaner. Do not use high pressure sprayers. In hot, windy conditions, it may be necessary to spray water on hot concrete to cool the surface prior to application so Concrete Hardner Lithium does not flash-dry on the surface. If Concrete Hardner Lithium comes into contact with glass, fabric, metal, or painted surfaces, immediately wipe contaminated surfaces with a damp cloth, then wipe dry with a second clean cloth.

Using an HVLP sprayer, or a pump-up sprayer for smaller jobs, spray Concrete Hardner Lithium evenly on the surface. Spread out any pools with a soft bristle broom or a flat microfiber pad. Keep surface wet for at least 20 minutes, adding more material where needed. Surface is ready for use when dry, but the complete reaction make take up to two weeks to develop depending on site temperature and conditions.

In cool, humid, or enclosed conditions, Concrete Hardner Lithium may stay wet for a long time. After 1 hour of dwell time, use an auto-scrubber to rinse the surface and pick up excess material. If concrete is dyed, acid stained, or integrally colored, after 20-30 minutes of dwell time, use scrubbing equipment to rinse the surface and pick up excess material. After bringing the surface to the desired surface profile by grinding or buffing, Concrete Hardner Lithium may be applied to enhance gloss, stain, and wear protection.

Interior: On newly placed interior machine-troweled concrete, Concrete Hardner Lithium may be applied immediately after finishing, or immediately after joints have been cut and cleaned, or anytime thereafter, at the project manager's discretion. If at time-of-placement, curing materials/bond breakers may be applied over the top of Concrete Hardner Lithium once it is no longer wet on the surface.

Exterior: On exterior concrete that has not been machine-troweled, wait until the surface is hard enough to bear foot traffic without damage before applying Concrete Hardner Lithium.

ESTIMATED COVERAGE

Steel Troweled Finish - 500-750 ft2 per gallon (1 liter per 12 to 18m2) Coverage rate will vary with concrete finish and porosity—broom finished concrete will require more material.

Clean Up – Use soap and water to clean tools and equipment.

Although Concrete Hardner Lithium is non-toxic and environmentally safe, it is alkali – use up or dry out extra material and dispose of according to local regulations. Don't pour into sewer systems or storm drains.

MAINTENANCE

Clean up spills promptly. Regular aggressive scrubbing with neutral cleaners is recommended. Avoid cleaners containing citrus or butyl compounds, or cleaners with a pH below 7.

CONCRETE HARDNER LITHIUM

PROPERTIES

Active Ingredients:	100% of total solids
Specific Gravity:	1.10
pH:	11
VOC Content:	<50g/L
Flash Point:	N/A
Freeze Point:	32ºF (0ºC)
Shelf Life:	1 Year in unopened factory sealed container

PACKAGING

5 Litre

LIMITATIONS

Concrete Hardner Lithium will not bridge or fill cracks and will not salvage honeycombed or structurally unsound surfaces. Not suitable for asphalt, non-cement surfaces or painted surfaces. (Paint and coatings may be applied over the top of Concrete Hardner Lithium - follow paint or coating manufacturer's instructions for surface preparation.)

This information corresponds to our actual knowledge.

Nevertheless, as product use conditions are out of our control, we can't take responsibility for the consequences of incorrect or improper use. We recommend always doing a patch test of the product in the required area before commencing full application.

Saint-Gobain. reserves the right to modify, without notice, characteristics, models and prices.

*ASR is the reaction between alkalies (sodium and potassium) in portland cement and certain siliceous rocks or minerals, such as opaline chert, strained quartz, and acidic volcanic glass, present in some aggregates. The products of the reaction may cause abnormal expansion and cracking of concrete in service.