Product	VIRUCOL+ Virucidal Bactericidal Hard Surface Cleaner Disinfectant
Revision date	16 June 2017
Revision	1

Safety Data Sheet (SDS)

Section 1: Identification of the substance/preparation and of the company/undertaking

1.1 Product identifier

Product name	VIRUCOL+ Virucidal Bactericidal Hard Surface Cleaner Disinfectant
Product no.	VIR1515L (concentrate) VIR15L(ready to use) VIR6750 (ready to use)
Synonyms, Trade names	No information available.

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

Identified uses	Cleaning agent.
Uses advised against	Any other purpose.

1.3 Details of the supplier of the safety data sheet

Supplier	o3 group ltd forsyth house cromac square belfast bt2 8la
Contact person	mail@o3group.uk

1.4 Emergency telephone number 028 9065 6552

Emergency telephone	Emergency Telephone Number: 028 9065 6552 08:30 – 17:00 Monday to Thursday 08:30 – 16:30 Friday

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and chemical hazards	Not classified
Human health	Skin Corr. 1C - H314, Eye Dam. 1 - H318
Environment	Not classified

2.2 Label elements

Contains	disodium metasilicate Alcohols, C12-15, ethoxylated Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides sodium hydroxide caustic soda
Detergent labeling	<5% anionic surfactants
Label in accordance with (EC) no. 1272/2008	
Signal word	Danger
Hazard statements	H314 Causes severe skin burns and eye damage.
Precautionary statements	**Prevention** P260 Do not breathe dust/fume/ gas/mist/vapours/spray. P280 Wear protective gloves/ protective clothing/eye protection/face protection.

Response
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/ shower.
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

None known.

Section 3: Composition/identification of ingredients

3.1 Substance

Not applicable.

3.2 Mixtures

Details below are for concentrated solution. VIRUCOL+ ready to use is diluted at a rate of 15:1 from these figures

Name	Product identifier	Reg. EU 1272/2008	%
disodium metasilicate	CAS-No.: 6834-92-0 EC No.: 229-912-9	Skin Corr. 1B - H314, STOT SE 3 - H335	1-10%
Alcohols, C12-15, ethoxylated	CAS-No.: 68131-39-5 EC No.: 500-195-7	Eye Dam. 1 - H318, Aquatic Acute 1 - H400, Aquatic Chronic 3 - H412	1-10%
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	CAS-No.: 68424-85-1 EC No.: 270-325-2	Acute Tox 3 - H301, Acute Tox 3 - H311, Skin Corr. 1C - H314, Eye Dam. 1 - H318, Aquatic Acute 1 - H400	0.1-0.9%
sodium hydroxide caustic soda	CAS-No.: 1310-73-2 EC No.: 215-185-5	Skin Corr. 1A - H314	0.01-0.09%

The full text for all hazard statements are displayed in section 16.

Composition comments The data shown are in accordance with the latest EC Directives.

Section 4: First aid measures

4.1 Description of first aid measures

General information Provide general first aid, rest, warmth and fresh air. As a general rule, in case of doubt or if symptoms persist, always call a doctor. Seek medical attention for all burns and eye injuries, regardless how minor they may seem. First aid personnel must be aware of own risk during rescue.

Inhalation Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

Ingestion If this product is ingested, remove victim immediately from source of exposure. Rinse mouth thoroughly. Do not induce vomiting. Provide fresh air, warmth and rest. Get medical attention. Never give anything by mouth to an unconscious person.

Skin contact Remove victim immediately from source of exposure. Remove contaminated clothing, shoes and jewelry and wash before reuse. Wash the skin immediately with water. Obtain medical attention if irritation persists or if blistering occurs.

Eye contact Do not rub eye. If this product contacts the eyes, gently flush eyes with water for at least fifteen (15) minutes, lifting the upper and lower eyelids occasionally. Remove contact lenses if present and easy to do so. Avoid contaminating unaffected eye. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Inhalation of mist or vapor may cause respiratory tract irritation.

Ingestion May cause chemical burns in mouth and throat. May cause severe internal injury.

Skin contact Corrosive. Cause severe skin burns.

Eye contact Corrosive to eyes. Causes severe eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to the physician Treat symptomatically.

Section 5: Fire-fighting measures

5.1 Extinguishing media

Extinguishing media Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media None noted.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products When heated, toxic and corrosive vapours/gases may be formed. During fire, toxic gases (CO, CO2) are formed.
Unusual fire & explosion hazards No unusual fire or explosion hazards noted.
Specific hazards Fire creates: Carbon monoxide (CO). Carbon dioxide (CO2). Water used for fire extinguishing, which has been in contact with the product, may be corrosive. Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for firefighters

Special fire fighting procedures If possible, fight fire from protected position. Avoid breathing fire vapours. Ventilate closed spaces before entering them. Containers close to fire should be removed immediately or cooled with water if safe to do so.
Protective equipment for firefighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Eliminate all sources of ignition. Avoid inhalation of vapours and contact with skin and eyes. In case of inadequate ventilation, use respiratory protection. Do not touch or walk through spilled material. If necessary evacuate surrounding areas.
For emergency responders Follow safe handling advice and personal protective equipment recommendations for normal use of product.

6.2 Environmental precautions

Environmental precautions Do not discharge onto the ground or into water courses. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Protection Agency or local authority.

6.3 Methods and material for containment and cleaning up

Spill clean up methods Stop leak if possible without risk DO NOT touch spilled material! Ventilate and evacuate the area. When dealing with a spillage, wear necessary protective equipment. Cover drains. Absorb spillage with non-combustible, inert absorbent material. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container. Wash thoroughly after dealing with a spillage.

6.4 Reference to other sections

Reference to other sections See section 1 for emergency contact. For personal protection, see section 8. For waste disposal, see section 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Handling Read and follow manufacturer's recommendations. Use proper personal protection when handling (refer to Section 8). Do not handle broken packages without protective equipment. Do not use contact lenses.
Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Do not eat, drink or smoke when using the product. Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Storage precautions Keep upright, locked up and out of reach of children. Keep the product in its original container. Store in cool dry areas away from direct sunlight or sources of ignition.

Storage class Corrosive storage.

7.3 Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

Usage description Use only according to directions. Replace and tighten cap after use.

Section 8: Exposure controls/Personal protection

8.1 Control parameters

Component	STD	TWA (8 Hrs)		STEL (15mins)		Notes
sodium hydroxide caustic soda	WEL				2 mg/m^3	
sodium hydroxide caustic soda	OEL				2 mg/m^3	

Ingredient comments OEL - Occulational Exposure Limit - Ireland, Occupational Exposure Limits 2016.
WEL - Workplace Exposure Limits - EH40/2005 Workplace exposure limits.

8.2 Exposure Controls

Protective equipment

Engineering measures Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Respiratory equipment If ventilation is inadequate, suitable respiratory protection must be worn. EN 136/140/145/143/149. The specific respirator selected must be based on contamination levels found in the work place. Where risk assessment shows air-purifying respirators are appropriate a full face respirator conforming to EN143 should be used, and suitable respirator cartridges as a backup to engineering controls. Consult manufacturer for specific advice. Recommended: Respirator with combination filter for organic vapour/particulate (EN 141).

Hand protection Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374) is recommended. (EU Directive 89/686/EEC). Gloves must be inspected prior to use. Suggested material: Butyl-rubber. Layer thickness: 0.11mm. Breakthrough time: >480 min. Consult manufacturer for advice.
Selection of the glove material depends on consideration of the penetration times, rates of diffusion and degradation, and concentration specific to the workplace. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Eye protection Wear safety goggles or face shield to prevent any possibility of eye contact. Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU).

Other protection Wear appropriate clothing to prevent skin contact. The selected clothing must satisfy the European norm standard EN 943. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handing this product.

Hygiene measures Observe normal hygiene standards. Wash promptly if skin becomes contaminated. When using do not eat, drink or smoke. Wash hands after use.

Process conditions Ensure that eye flushing systems and safety showers are located close by in the work place.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance Liquid.

Colour	Clear. Colourless.
Odour	None.
Odour threshold - lower	No information available.
Odour threshold - upper	No information available.
pH-Value, Conc. Solution	>14.
pH-Value, Diluted solution	No information available.
Melting point	No information available.
Initial boiling point and boiling range	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability state	No information available.
Flammability limit - lower(%)	No information available.
Flammability limit - upper(%)	No information available.
Vapour pressure	No information available.
Vapour density (air=1)	No information available.
Relative density	1.030g/cm^3 @ 20.00 °C
Bulk density	No information available.
Solubility	Soluble in water.
Decomposition temperature	No information available.
Partition coefficient; n-Octanol/Water	No information available.
Auto ignition temperature (°C)	No information available.
Viscosity	No information available.
Explosive properties	Not classified as explosive.
Oxidising properties	No information available.

9.2 Other information

Molecular weight	No information available.
Volatile organic compound	No information available.
Other information	None noted.

Section 10: Stability and reactivity

10.1 Reactivity

Reactivity	Reaction with: Strong oxidising agents. Reaction with strong acid.

10.2 Chemical stability

Stability	Stable under normal temperature conditions and recommended use.

10.3 Possibility of hazardous reactions

Hazardous reactions Avoid contact with acids and oxidising substances.
Hazardous polymerisation Will not polymerise.
Polymerisation description Not applicable.

10.4 Conditions to Avoid

Conditions to avoid Heat, sparks, open flames, temperature extremes and direct sunlight.

10.5 Incompatible materials

Materials to avoid Avoid oxidising agents. Strong acids. Do not mix with other chemicals unless listed on directions.

10.6 Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Section 11: Toxicological information

11.1 Information on toxicological effects

Toxicological information No toxicological information for the overall finished product.

Acute toxicity (Oral LD50) Alcohols, C12 -15, ethoxylated (CAS: 68131-39-5) > 5000 mg/kg Rat. REACH dossier information. SODIUM HYDROXIDE (CAS: 1310-73-2): 325 mg/kg bw Rabbit. REACH dossier information.
Acute toxicity (Dermal LD50) Alcohols, C12 -15, ethoxylated (CAS: 68131-39-5) > 2000 mg/kg Rat. REACH dossier information. SODIUM HYDROXIDE (CAS: 1310-73-2): 325 mg/kg bw Rabbit. REACH dossier information.
Acute toxicity (Inhalation LD50) Alcohols, C12 -15, ethoxylated (CAS: 68131-39-5) > 1.6 mg/l (dust/mist) Rat 4 hours. REACH dossier.

Serious eye damage/irritation Causes severe eye damage.

Skin corrosion/irritation The product is classified as a skin corrosion/irritation hazard.

Respiratory sensitisation The product is not classified as a respiratory hazard.
Skin sensitisation The product is not classified as a skin sensitisation hazard

Germ cell mutagenicity No information available.

Carcinogenicity The product is not classified as a carcinogen hazard

Specific target organ toxicity - Single exposure:
STOT - Single exposure No information available.
Specific target organ toxicity - Repeated exposure:
STOT - Repeated exposure No information available.

Inhalation Inhalation of mist or vapor may cause respiratory tract irritation.
Ingestion May cause chemical burns in mouth and throat. May cause severe internal injury.
Skin contact Corrosive. Cause severe skin burns.
Eye contact Corrosive to eyes. Causes severe eye damage.
Waste management When handling waste, consideration should be made to the safety precautions applying to handling of the product.

Routes of entry No information available.
Target organs Eyes, skin, digestive system, respiratory system.

Aspiration hazards: No information available.
Reproductive toxicity: The product is not classified as a reprodutive hazard.

Name	LD50 oral	LD50 dermal	LD50 inhalation
disodium metasilicate	600.00mg/kg Rat		
Alcohols, C12-15, ethoxylated	>5000.00mg/kg Rat		

Section 12: Ecological information

12.1 Toxicity

Acute toxicity - Fish	Alcohols, C12 -15, ethoxylated (CAS: 68131-39-5): LC50 96 hours 0.59 mg/l Pleuronectes platessa. REACH dossier information. DISODIUM METASILICATE (CAS: 6834-92-0): LC50 96 hours 210 mg/l Brachydanio rerio (Zebra Fish). REACH dossier information. SODIUM HYDROXIDE (CAS: 1310-73-2): LC50 96 hours 45.4 mg/l Oncorhynchus mykiss (Rainbow trout).
Acute toxicity - Aquatic invertebrates	Alcohols, C12 -15, ethoxylated (CAS: 68131-39-5): EC50 48 hours 0.14 mg/l Daphnia magna REACH dossier information. DISODIUM METASILICATE (CAS: 6834-92-0): EC50 48 hours 7.8 pH Daphnia magna. REACH dossier information. SODIUM HYDROXIDE(CAS: 1310-73-2): EC50 48 hours 40.4 ug/L Ceriodaphnia sp. REACH dossier information.
Acute toxicity - Aquatic plants	Alcohols, C12 -15, ethoxylated (CAS: 68131-39-5): EC50 72 hours 0.75 mg/l Selenastrum capricornutum REACH dossier information. DISODIUM METASILICATE (CAS: 6834-92-0): EC50 72 hours 207 mg/l Desmodesmus subspicatus. REACH dossier information.
Acute toxicity - Microorganisms	No information available.
Chronic toxicity - Fish	No information available.
Chronic toxicity - Aquatic invertebrates	No information available.
Chronic toxicity - Aquatic plants	No information available.
Chronic toxicity - Microorganisms	No information available.
Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.
Eco toxilogical information	No ecological toxicity available on the overall finished product.

12.2 Persistence and degradability

Degradability	The degradability of the product has not been stated.
Biological oxygen demand	No information available.
Chemical oxygen demand	No information available.

12.3 Bioaccumulative potential

Bioaccumulative potential	No data available on bioaccumulation.
Bioacculmation factor	No information available.
Partition coefficient; n-Octanol/Water	No information available.

12.4 Mobility in soil

Mobility	Soluble in water.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This product is not identified as a PBT/vPvB substance.

12.6 Other adverse effects

Other adverse effects	None known.

Name	Acute toxicity (Fish)	Acute toxicity (Aquatic invertebrates)	Acute toxicity (Aquatic plants)
Alcohols, C12-15, ethoxylated	LC50 96 Hours >2.00ppm Brachydanio rerio (Zebra Fish)		

Section 13: Disposal considerations

Waste management	When handling waste, consideration should be made to the safety precautions applying to handling of the product.

13.1 Waste treatment methods

Disposal methods	Dispose of waste and residues in accordance with local authority requirements. For waste

disposal, use a licensed industrial waste disposal agent.

Section 14: Transport information

14.1 UN number

UN no. (ADR)	UN1760
UN no. (IMDG)	UN1760
UN no. (IATA)	UN1760

14.2 UN proper shipping name

ADR proper shipping name	CORROSIVE LIQUID, N.O.S. (disodium metasilicate + Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides)
IMDG proper shipping name	CORROSIVE LIQUID, N.O.S. (disodium metasilicate + Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides)
IATA proper shipping name	CORROSIVE LIQUID N.O.S. (disodium metasilicate + Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides)

14.3 Transport hazard class(es)

ADR class	8
IMDG class	8
IATA class	8

Transport labels

14.4 Packing group

ADR/RID/ADN packing group	III
IMDG packing group	III
IATA packing group	III

14.5 Environmental hazards

ADR	No
IMDG	No
IATA	No

14.6 Special precautions for user

EMS	F-A, S-B
Emergency action code	A3
Hazard no. (ADR)	80
Tunnel restriction code	(E)

14.7 Transport in bulk according to annex II of MARPOL73/78 and the IBC code

Not applicable.

Section 15: Regulatory information

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

EU legislation	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. The UN Globally Harmonized System (GHS) Safety Data Sheet format (Annex IV) is implemented as Annex II of REACH EU No 453/2010 of 20th May 2010 amending regulation (EC) No 1907/2006.
Approved code of practice	Workplace Exposure Limits Guidance Note EH40/2005. 2016 Code of Practice for the Chemical Agents Regulations in accordance with section 60 of the Safety, Health and Welfare at Work Act 2005 (No. 10 of 2005).

Chemical safety assessment	No chemical safety assessment has been carried out.

Section 16: Other information

General information	This Safety Data Sheet is in accordance with Reach Regulation (EC) No 453/2010.
Revision comments	This is a first issue.
Revision date	16 June 2017
Revision	1
Safety data sheet status	Approved.

Hazard statements in full

H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.