

MATERIAL: TECHSIL® RTV1084G

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

- 1.1 Product Name:** Techsil® RTV1084G
1.2 Product Use: Adhesive Sealant
1.3 Supplier: Techsil Ltd
34 Bidavon Industrial Estate
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SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture:

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Hazardous to the aquatic environment, chronic toxicity, H410 Very toxic to aquatic life with long lasting effects.
category 1

2.2 Label Elements:

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: Warning

Hazard statements:

H410 Very toxic to aquatic life with long lasting effects.
EUH208 Contains: AMINOPROPYLTRIEHTOXYSILANE
May produce an allergic reaction.

Precautionary

P273 Avoid release to the environment
P391 Collect spillage

2.3 Other Hazards:

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

Contact Details

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Information not relevant.

3.2 Mixtures:

Contains:

Identification.	Conc. %.	Classification 1272/2008 (CLP).
ALUMINIUM NITRIDE IN LIQUID SUSPENSION		
CAS. 24304-00-5	30-50	Aquatic Chronic 1 H410
EC. 246-140-8		
INDEX		
Reg. no. 01-2120119762-58		

TRIS (ISOPROPENYLOXY) VINYL SILANE		
CAS. 15332-99-7	1-5	Flam. Liq. 3 H226, Eye Irrit. 2 H319
EC. 239-362-1		
INDEX		
Reg. no. 01-2120120418-64		

AMINOPROPYL TRIETHOXYSILANE		
CAS. 919-30-2	0-1	Acute Tox. 4 H302, Skin Carr. 1B H314, Skin Sens. 1 H317
EC. 213-048-4		
INDEX		
Reg. no. 01-2119480479-24		

ACETONE		
CAS. 67-64-1	0-0.1	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
EC. 200-662-2		
INDEX. 606-001-00-8		
Reg. no. 01-2119471330		

Note: Upper limit is not included into the range.

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures:

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

4.2 Most Important Symptoms and Effects, both Acute and Delayed:

For symptoms and effects caused by the contained substances, see chap. 11.

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed:

Information not available.

Contact Details

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media:

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2 Special Hazards Arising from the Substance or Mixture:

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3 Advice for Firefighters:

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal firefighting clothing i.e. Fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2 Environmental Precautions:

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3 Methods and Material for Containment and Cleaning-Up:

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10.

Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7.

Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4 Reference to Other Sections:

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2 Conditions for Safe Storage, Including and Incompatibilities:

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

7.3 Specific End Use(s):

Information not available.

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SECTION 8: HANDLING AND STORAGE

8.1 Control Parameters:

Regulatory References

CZE	Ceska Republika	Nařizení vlády č. 361/2007 Sb. - kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	Espana	INSHT –Limites de exposicion professional para agentes quimicos en Espana 2015
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet Sosiaali- ja terveystieteiden tutkimuskeskuksen julkaisuja 2012:5
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH4012005 Workplace exposure limits
HUN	Magyarország	50/2011. (XII. 22.) NGM rendelet. a munkahelyek kémiai biztonságáról
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Databank of the social and Economic Council of Netherlands (SER) Values, AF 2011:18
NOR	Norge	Veiledning om Administrative normer for forurensning I arbeidsatmosfaere
POL	Polska	ROZPORZADZENIE MINISTRA PRACY I POLITYKI SPOLECZNEJ z dnia 16 grudnia 2011r
SVK	Slovensko	NARIADENIE VLADY Slovenskej republiky z 20. juna 2007
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18
TUR	Türkiye	2000/39/EC sayılı Direktifin ekidir
EU	OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/139/EC.
	TLV-ACGIH	ACGIH 2014

ALUMINIUM NITRIDE IN LIQUID SUSPENSION

Health – Derived no-effect level – DNEL/DMEL

Route of exposure	Effects on consumers					Effects on workers		
	Acute local	Acute systematic	Chronic Local	Chronic systematic	Acute local	Acute systematic	Chronic local	Chronic systematic
Inhalation							0.034 mg/m3	0.47 mg/m3

AMINOPROPYLTRIETHOXYSILANE

Predicted no-effect concentration – PNEC.

Normal value in fresh water	0.33	mg/l
Normal value in marine water	0.033	mg/l
Normal value for fresh water sediment	0.26	mg/kg
Normal value for water, intermittent release	3.3	mg/l
Normal value of STP microorganisms	13	mg/l
Normal value for the terrestrial compartment	0.04	mg/kg

Health – Derived no-effect level – DNEL/DMEL

Route of exposure	Effects on consumers					Effects on workers		
	Acute local	Acute systematic	Chronic Local	Chronic systematic	Acute local	Acute systematic	Chronic local	Chronic systematic
Inhalation							VND	59 mg/m3
Skin							VND	8.3 mg/kg bw/d

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ACETONE

Threshold Limit Value.

Type	Country	TWA/8h mg/m ³	Ppm	STEL/15min mg/m ³	ppm
TLV	CZE	800		1500	
AGW	DEU	1200	500	2400	1000
MAK	DEU	1200	500	2400	1000
TLV	DNK	600	250		
VLA	ESP	1210	500		
HTP	FIN	1200	500	1500	630
VLEP	FRA	1210	500	2420	1000
WEL	GBR	1210	500	3620	1500
AK	HUN	1210		2420	
TLV	ITA	1210	500		
OEL	NLD	1210		2420	
TLV	NOR	295	125		
NOS	POL	600		1800	
NPHV	SVK	1210	500	2420	
MAK	SWE	600	250	1200	500
ESD	TUR	1210	500		
OEL	EU	1210	500		
TLV- ACGIH		1187	500	1781	750

Predicted no-effect concentration – PNEC.

Normal value in fresh water	10.6	mg/l
Normal value in marine water	1.06	mg/l
Normal value of STP microorganisms	100	mg/kg

Health – Derived no-effect level – DNEL/DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systematic	Chronic Local	Chronic systematic	Acute local	Acute systematic	Chronic local	Chronic systematic
Oral							VND	62 mg/kg bw/d
Inhalation			VND	200 mg/m ³			VND	1210 mg/m ³
Skin			VND	62 mg/kg bw/d			VND	186 mg/kg bw/d

Legend:

(C)= CEILING; INHAL= Inhalable Fraction; RESP = Respirable Fraction; THORA= Thoracic Fraction.
VND =hazard identified but no DNEL/PNEC available; NEA= no exposure expected; NPI =no hazard identified.

8.2 Exposure Controls:

Comply with the safety measures usually applied when handling chemical substances. HAND PROTECTION
None required.

SKIN PROTECTION

None required.

EYE PROTECTION

None required.

RESPIRATORY PROTECTION

None required, unless indicated otherwise in the chemical risk assessment. ENVIRONMENTAL EXPOSURE CONTROLS.

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

Appearance	:	Pasty Liquid
Colour	:	Grey
Odour	:	Characteristic
Odour Threshold	:	Not available
pH.	:	Not available
Melting point / freezing point	:	Not available
Initial boiling point	:	Not available
Boiling range	:	Not available
Flash Point	:	>150°C
Evaporation Rate	:	Not available
Flammability of solids and gases	:	Not available
Lower inflammability limit	:	Not available
Upper inflammability limit	:	Not available
Lower explosive limit	:	Not available
Upper explosive limit	:	Not available
Vapour pressure	:	Not available
Vapour density	:	Not available
Solubility	:	immiscible with water
Partition coefficient n-octanol/water	:	Not available
Auto-ignition temperature	:	>400°C
Decomposition temperature	:	Not available
Viscosity	:	Not available
Explosive properties	:	Not available
Oxidising properties	:	Not available

9.2 Other Information:

Information not available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

There are no particular risks of reaction with other substances in normal conditions of use.
ACETONE: decomposes under the effect of heat.

10.2 Chemical Stability:

The product is stable in normal conditions of use and storage.

10.3 Possibility of Hazardous Reactions:

No hazardous reactions are foreseeable in normal conditions of use and storage.
ACETONE: risk of explosion on contact with: bromine trifluoride, difluoro dioxide, hydrogen peroxide, nitrosyl chloride, 2-methyl-1,3 butadiene, nitromethane, nitrosyl perchlorate. Can react dangerously with: potassium tert-butoxide, alkaline hydroxides, bromine, bromoform, isoprene, sodium, sulphur dioxide, chromium trioxide, chromyl chloride, nitric acid, chloroform, peroxymonosulphuric acid, phosphoryl chloride, chromosulphuric acid, fluorine, strong oxidising agents. Develops flammable gases with nitrosyl perchlorate.

10.4 Conditions to Avoid:

None in particular. However the usual precautions used for chemical products should be respected.
ACETONE: avoid exposure to sources of heat and naked flames.

10.5 Incompatible Materials:

ACETONE: acid and oxidising substances.

10.6 Hazardous Decomposition Products:

ACETONE: ketenes and other irritating compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

Contact Details

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

This product contains sensitizing substance/s and may cause allergic reactions.

AMINOPROPYL TRIETHOXY SILANE LD50 (Dermal).	> 2000 mg/kg
ACETONE LD50 (Oral).	5800 mg/kg
LD50 (Dermal).	> 7400 mg/kg (Rat)

SECTION 12: ECOLOGICAL INFORMATION

This product is dangerous for the environment and highly toxic for aquatic organisms. In the long term, it has negative effects on the aquatic environment.

12.1 Toxicity:

ALUMINIUM NITRIDE IN LIQUID SUSPENSION LC50 • for Fish.	6.17 mg/l/96h (Onocorhynchus mykiss rainbow trout)
EC50 - for Crustacea.	3.9 mg/l/48h (Daphnia magna water flea)
EC50 - for Algae / Aquatic Plants.	10.9 mg/1172h (Desmodedemus subspicatus)
Chronic NOEC for Fish.	0.013 mg/l

ACETONE LC50 - for Fish.	6210 mg/l/96h
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12.2 Persistence and Degradability:

ACETONE
Rapidly biodegradable.

12.3 Bioaccumulative Potential:

ACETONE Partition coefficient: n-octanol/water.	-0.23
BCF.	3

12.4 Mobility in Soil:

Information not available.

12.5 Results of PBT and vPvB Assessment:

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0.1%.

12.6 Other Adverse Effects:

Information not available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 UN Number:

ADR / RID, IMDG, IATA: 3082

If transported in simple or internal packaging with capacity of less than 5 kg or 5 litres, it is not subject to ADR provisions, as provided for by Special Provision 375.

Contact Details

14.2 UN Proper Shipping Name:

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ALUMINIUM NITRIDE IN LIQUID SUSPENSION)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ALUMINIUM NITRIDE IN LIQUID SUSPENSION)
IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ALUMINIUM NITRIDE IN LIQUID SUSPENSION)

14.3 Transport Hazard Class(es):

ADR/RID: Class 9 Label 9
IMDG: Class 9 Label 9
IATA: Class 9 Label 9

14.4 Packing Group:

ADR/RID, IMDG, IATA: III

14.5 Environmental Hazards:

ADR/RID: Environmentally Hazardous.
IMDG: Marine Pollutant.
IATA: Environmentally Hazardous.

14.6 Special Precautions for User:

ADR/RID:	HIN – Kemler: 90	Limited Quantities: 5L	Tunnel restriction code: (E)
IMDG:	EMS: F-A, S-F	Limited Quantities: 5L	
IATA:	Cargo:	Maximum Quantity: 450L	Packaging instructions 964
	Passenger:	Maximum Quantity: 450L	Packaging instructions 964
	Special instructions	A97, A158, A197	

14.7 Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code:

Information not relevant.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health & Environmental Regulations/Legislation Specific for the Substance or Mixture:

Seveso category.

1

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product

Point. 3

Substances in Candidate List (Art.59 REACH).

None

Substances subject to authorisation (Annex XIV REACH)

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention

None

Healthcare controls

Information not available

German regulation on the classification of substances hazardous to water (VwVwS 2005).

WGK 1: Low hazard to waters

15.2 Chemical Safety Assessment:

No chemical safety assessment has been processed for the mixture and the substances it contains.

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SECTION 16: OTHER INFORMATION

Text of hazard (H) indications mentioned in section 2-3 of the sheet.

Flam. Liq.2	Flammable liquid, category 2
Flam. Liq.3	Flammable liquid, category 3
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Eye Irrit. 2	Eye irritation, category 2
Skin Sens.1	Skin sensitization, category 1
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

LEGEND:

ADR: European Agreement concerning the carriage of Dangerous goods by Road
CAS NUMBER: Chemical Abstract Service Number
CE50: Effective concentration (required to induce a 50% effect)
CE NUMBER: Identifier in ESIS (European archive of existing substances)
CLP: EC Regulation 1272/2008
DNEL: Derived No Effect Level
EmS: Emergency Schedule
GHS: Globally Harmonized System of classification and labeling of chemicals
IATA DGR: International Air Transport Association Dangerous Goods Regulation
IC50: Immobilization Concentration 50%
IMDG: International Maritime Code for dangerous goods
IMO: International Maritime Organization
INDEX NUMBER: Identifier in Annex VI of CLP
LC50: Lethal Concentration 50%
LD50: Lethal dose 50%
OEL: Occupational Exposure Level
PBT: Persistent bioaccumulative and toxic as REACH Regulation
PEC: Predicted environmental Concentration
PEL: Predicted exposure level
PNEC: Predicted no effect concentration
REACH: EC Regulation 1907/2006
RID: Regulation concerning the international transport of dangerous goods by train
TLV: Threshold Limit Value
TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
TWA STEL: Short-term exposure limit
TWA: Time-weighted average exposure limit
VOC: Volatile organic Compounds
vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
WGK: Water hazard classes (German).

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GENERAL BIBLIOGRAPHY

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
2. Regulation (EU) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament

The Merck Index. - 10th Edition

Handling Chemical Safety

INRS - Fiche Toxicologique (toxicological sheet)

Patty - Industrial Hygiene and Toxicology

N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition

ECHA website

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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 other 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 themselves as to the suitability of such information for their particular use.

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