SAFETY DATA SHEET
BELZONA® 9411 (RELEASE AGENT)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name BELZONA® 9411 (RELEASE AGENT)

Product number SN2326

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

Identified uses Mould and component release agent. For industrial use only.

Uses advised against The product should not be used for purposes other than those recommended in the appropriate Instructions For Use (IFU) leaflet.

1.3. Details of the supplier of the safety data sheet

Supplier
Belzona Polymerics Limited
Claro Road, Harrogate
HG1 4DS
United Kingdom
+44 1423 567641
sds@belzona.com

Manufacturer
Belzona Polymerics Limited
Claro Road, Harrogate
HG1 4DS
United Kingdom
+44 1423 567641
sds@belzona.com

1.4. Emergency telephone number

Emergency telephone ChemTel: +1 813-248-0585

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Eye Irrit. 2 - H319 STOT SE 3 - H336 STOT RE 1 - H372 Asp. Tox. 1 - H304

Environmental hazards Aquatic Chronic 2 - H411

Reference The full text for all hazard statements is displayed in Section 16.

2.2. Label elements

Pictogram

Signal word Danger

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Hazard statements
H304 May be fatal if swallowed and enters airways.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H372 Causes damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements
P260 Do not breathe vapours.
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing and eye protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310 Immediately call a POISON CENTRE or doctor.
P501 Dispose of contents/ container in accordance with national regulations.

Contains
HYDROCARBONS, C9-C12, N-ALKANES, ISOALKANES, CYCLICS, AROMATICS (2-25%), trans-DICHLOROETHYLENE

2.3. Other hazards

Can become flammable in use. Based on information received from our suppliers no PBT or vPvB substances are intentionally added to this product.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HYDROCARBONS, C9-C12, N-ALKANES, ISOALKANES, CYCLICS, AROMATICS (2-25%) — **30-60%**

CAS number: Proprietary | EC number: 919-446-0 | REACH registration number: 01-2119458049-33-xxxx

Classification
Flam. Liq. 3 - H226
STOT SE 3 - H336
STOT RE 1 - H372
Asp. Tox. 1 - H304
Aquatic Chronic 2 - H411

trans-DICHLOROETHYLENE — **10-30%**

CAS number: 156-60-5 | EC number: 205-860-2

Classification
Flam. Liq. 2 - H225
Acute Tox. 4 - H332
Eye Irrit. 2 - H319
STOT SE 3 - H336
Aquatic Chronic 3 - H412

METHYL NONAFLUOROISOBUTYLETHER — **10-30%**

CAS number: 163702-08-7 | EC number: 422-270-2 | REACH registration number: 01-0000016878-53-xxxx

Classification
Aquatic Chronic 4 - H413

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METHYL NONAFLUOROBUTYLETHER		10-30%
CAS number: 163702-07-6	EC number: 422-270-2	REACH registration number: 01-0000016878-53-xxxx

Classification
Aquatic Chronic 4 - H413

The full text for all hazard statements is displayed in Section 16.

Composition comments The benzene content of the hydrocarbon constituents contained within this product is significantly below the 0.1% w/w threshold and therefore, the product is not classified as a carcinogen.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air. Keep the patient warm and at rest. Give nothing by mouth.

Ingestion If accidentally swallowed obtain immediate medical attention. Keep at rest. Rinse mouth with plenty of water. Do NOT induce vomiting.

Skin contact Remove contaminated clothing. Wash skin thoroughly with soap and water or use a proprietary skin cleaner. Do NOT use solvents or thinners. If irritation or inflammation persists, seek medical attention.

Eye contact Contact lenses should be removed. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart, and seek medical advice.

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

General information Exposure to organic solvent vapours may result in the following symptoms headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases loss of consciousness.

Inhalation Exposure to vapours may result in irritation of the mucous membrane and the respiratory system. Vapours may cause drowsiness and dizziness.

Ingestion Aspiration of solvent vapours into the lungs may cause severe pulmonary problems.

Skin contact Prolonged or repeated contact with the skin or mucous membrane may result in irritant symptoms such as redness, blistering or dermatitis. Onset of symptoms may be delayed.

Eye contact Irritating to eyes.

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

Notes for the doctor None.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use: sand, alcohol resistant foam, carbon dioxide, chemical powder, or water fog for larger fires.
Do NOT use water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide, hydrogen chloride and hydrogen fluoride may be produced.

5.3. Advice for firefighters

Protective actions during firefighting Fire will produce dense black smoke containing hazardous products of combustion. Exposure to decomposition products may be a hazard to health. Appropriate self-contained breathing apparatus may be required. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or watercourses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Exclude non-essential personnel. Keep up-wind of spill to avoid breathing vapours. Avoid contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions Prevent spills from entering drains or sewers. If the product enters drains or sewers in large quantities, the local Water Company should be contacted immediately; in the case of contamination of streams, rivers or lakes, the appropriate National regulating agency.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Contain and collect spillages with non-combustible absorbent materials e.g. sand, earth, vermiculite, diatomaceous earth and place into a suitable labelled container. Clean surfaces down with a water and detergent mixture. Do not allow spilled product or the associated washings to enter surface water drains or watercourses.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see section 13. For information on National regulating agencies refer to Section 16.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions GENERAL Avoid inhalation of vapour. Keep the container tightly closed until ready for use. Prevent air-borne concentrations higher than the occupational exposure limits (see Section 8). Avoid skin and eye contact. Smoking, eating and drinking should be prohibited in areas of storage and use. For personal protection see Section 8. Always keep in containers made of the same material as the supply container. FIRE/EXPLOSION This product may become flammable in use. Exclude sources of heat, sparks and open flame. Vapours are heavier than air and may spread along floors. They may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour with air. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Good housekeeping standards and regular safe removal of waste materials will minimise the risks of spontaneous combustion and other fire hazards. Ensure emergency equipment (for fires, spills, leaks, etc.) is readily available. SPECIAL This product should not be applied where substrate temperatures exceed 150°C.

Advice on general occupational hygiene Wash at the end of each work shift and before eating, smoking and using the toilet. Ensure eye wash facilities (fountain, bottle, vials, etc.) are readily available. Do not put contaminated articles or equipment e.g. spatulas, applicators, brushes, cloths etc., into pockets. Where necessary, contaminated work clothing and shoes should be removed to prevent cross contamination of surfaces and the risk of inadvertent skin contact and ingestion.

7.2. Conditions for safe storage, including any incompatibilities

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Storage precautions Observe the label precautions. Store between 5 °C and 30 °C unless otherwise stated in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorised access. Have appropriate fire extinguishers available in and near the storage area. Store separately from oxidising agents and strongly alkaline and strongly acidic materials. ENVIRONMENTAL STORAGE PRECAUTIONS Spillage, incorrect storage of chemicals or waste materials or unsuitable disposal activities can result in pollutants seeping through the soil, causing serious harm to groundwater- which is a vital source of drinking water. All wastes, especially liquid wastes, must be securely stored on site in designated areas that are isolated from surface drains and bunded to contain any spillages.

7.3. Specific end use(s)

Specific end use(s) Application by brush. Single component material. This product does not require mixing with another component before use. Please refer to the relevant Belzona® Instructions For Use for further information.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

HYDROCARBONS, C9-C12, N-ALKANES, ISOALKANES, CYCLICS, AROMATICS (2-25%)

Long-term exposure limit (8-hour TWA): SUP 350 mg/m³

trans-DICHLOROETHYLENE

Long-term exposure limit (8-hour TWA): SUP 790 mg/m³
Short-term exposure limit (15-minute): SUP

HYDROCARBONS, C9-C12, N-ALKANES, ISOALKANES, CYCLICS, AROMATICS (2-25%)

DNEL

Industry - Inhalation; Long term systemic effects: 330 mg/m³
Industry - Dermal; Long term systemic effects: 44 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 71 mg/m³
Consumer - Dermal; Long term systemic effects: 26 mg/kg/day
Consumer - Oral; Long term systemic effects: 26 mg/kg/day

8.2. Exposure controls

Appropriate engineering controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of vapours below the relevant occupational exposure limits, suitable respiratory protective equipment should be worn (see 'Respiratory protection' below).

Eye/face protection It is recommended that eye protection, for example safety spectacles or goggles are worn at all times during the handling and use of this material. Eye protection should be selected in accordance with EN 166 Personal eye protection.

Hand protection Hand protection should be selected in accordance with EN 374 Protective gloves against chemicals. The breakthrough time of the gloves selected should exceed the expected use period. Where this is not possible gloves should be changed in good time, and in any case before the breakthrough time is exceeded. If any doubt exists, advice should be sought from glove suppliers on appropriate types. Barrier creams may help to protect exposed areas of skin but are not substitutes for full physical protection. They should not be applied once exposure has occurred. SPECIFIC RECOMMENDATIONS Wear protective gloves made of the following material: Neoprene. Nitrile rubber. STANDARD APPLICATIONS Medium-heavy weight gauntlet type gloves that provide wrist protection are suitable. APPLICATION OF SMALL QUANTITIES Light weight disposable gloves are normally suitable.

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Other skin and body protection	STANDARD APPLICATIONS Synthetic polyethylene coveralls such as the Tyvek PRO-TECH® or equivalent coveralls manufactured to EN 13034 Type 6, Protective clothing against liquid chemicals. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner. APPLICATION OF SMALL QUANTITIES Cotton overalls are normally suitable.
Respiratory protection	It is essential that the concentration of the contaminant(s) in the application environment does not exceed the applicable Occupational Exposure Limit(s) (OELs) multiplied by the Assigned Protection Factor (APF) quoted for the respiratory protective equipment selected. STANDARD APPLICATIONS Where necessary, it is recommended that respiratory protective equipment that complies with EN 136 (full face mask) or EN 140 (half face mask) should be worn in combination with a low boiling point organic vapour filter (AX). Where the application environment is likely to be contaminated by significant concentrations of dust then the appropriate particulate prefilter (N-, R- or, P-series) should be worn in combination with the above. It is essential that the facepiece is correctly fitted and the filter is changed in accordance with the manufacturer's instructions. Not normally required when this product is handled and applied in well ventilated areas.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	White/off-white.
Odour	Solvent.
Odour threshold	Not applicable.
pH	Not applicable.
Melting point	Not available.
Initial boiling point and range	>40°C/>104°F @ 760 mm Hg
Flash point	Technically not feasible. Does not flash.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	~51 kPa @ 25°C/77°F
Vapour density	> 1
Relative density	0.95 - 1.05 @ 20°C/68°F
Solubility(ies)	Slightly soluble in water.
Partition coefficient	Not available.
Auto-ignition temperature	>280°C/>53°F
Decomposition Temperature	Not available.
Viscosity	Not available.
Explosive properties	Not applicable.
Oxidising properties	Not applicable.

9.2. Other information

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Other information This section contains typical values for Health, Safety and Environmental guidance only and is not intended to represent a technical specification for the product.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable under recommended storage and handling conditions (see Section 7).

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No hazardous reactions expected when stored and handled as recommended.

10.4. Conditions to avoid

Conditions to avoid There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid Keep away from oxidising agents and strongly alkaline and strongly acidic materials to prevent the possibility of exothermic reaction.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50}) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50}) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50}) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Irritating to eyes.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

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IARC carcinogenicity Not listed.

NTP carcinogenicity Not listed.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Central nervous system depression including narcotic effects such as drowsiness, narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Target organs Central nervous system

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways. Kinematic viscosity ≤ 20.5 mm²/s.

Route of entry Ingestion Inhalation Skin and/or eye contact

SECTION 12: Ecological Information

Ecotoxicity There is no data on the product itself. The following information is provided on the basis of the individual component data available.

12.1. Toxicity

Toxicity Based on the individual component data, is expected to have experimental LC50/EC50/IC50 values between 1 and 10 mg/l in most sensitive species.

12.2. Persistence and degradability

Persistence and degradability Based on the individual component data, the product is not expected to be rapidly biodegradable according to OECD/EC guidelines.

12.3. Bioaccumulative potential

Bioaccumulative potential Based on the individual component data, the product is expected to bioaccumulate.

Partition coefficient Not available.

12.4. Mobility in soil

Mobility There is no data available on the product itself.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment Based on information received from our suppliers no PBT or vPvB substances are intentionally added to this product.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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Disposal methods	Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Controlled wastes include non-hazardous industrial and hazardous chemical wastes. All controlled wastes should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. In addition, hazardous chemical wastes should be disposed of in accordance with the Hazardous Waste Regulations. When in doubt, using information provided in this safety data sheet, advice should be obtained from the National regulating agency whether the Hazardous Waste Regulations apply. Refer to information sources listed in Section 16. COMPONENT DISPOSAL TRANSIT PACKAGING: shrink or stretch wrap, boxes and fittings that have not been contaminated with product should be re-used or recycled. UNUSED PRODUCT: and empty uncleaned containers should be disposed of as hazardous chemical waste.
Waste class	List of waste (LoW) code: 14 01 02* *Hazardous waste pursuant to Directive 91/689/EEC. The LoW code quoted in this section is a general entry. LoW codes should be assigned based on the end use of the product. Where a more specific code is available it should be used in preference to the code given above. Where in doubt refer to the List of Wastes, your local licensed waste contractor or the National regulating agency. Refer to information sources listed in Section 16.

SECTION 14: Transport information

General	Labelling and packaging requirements may vary with pack and load size. Please refer to the current transport regulations. Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of accident or spillage.

14.1. UN number

UN No. (ADR/RID)	3082
UN No. (IMDG)	3082
UN No. (ICAO)	3082

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	Environmentally hazardous substance, liquid, n.o.s. (containing Turpentine substitute mixture)
Proper shipping name (IMDG)	Environmentally hazardous substance, liquid, n.o.s. (containing Turpentine substitute mixture)
Proper shipping name (ICAO)	Environmentally hazardous substance, liquid, n.o.s. (containing Turpentine substitute mixture)
Proper shipping name (ADN)	Environmentally hazardous substance, liquid, n.o.s. (containing Turpentine substitute mixture)

14.3. Transport hazard class(es)

ADR/RID class	9
IMDG class	9
ICAO class/division	9

14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

Yes. Labelling requirements will vary with hazardous net quantity. Please refer to the current transport regulations.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not carried in bulk.

SECTION 15: Regulatory information

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

National regulations	The provisions of the Health and Safety at Work Act and the Control of Substances Hazardous to Health Regulations with amendments apply to the use of this product at work. This product may add to the calculation for determining whether a site is within scope of the Control of Major Accident Hazards Regulations.
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 (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. In accordance with Regulation (EC) No 453/2010.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

General information	The information contained within this safety data sheet does not constitute the users own assessment of workplace risks as required by other health and safety legislation. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant National legislation are complied with. The information contained within this safety data sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.
Key literature references and sources for data	Provision and Use of Personal Protective Equipment Regulations 1992 (SI 1992: 2932). PPG18: Control of Spillages and fire fighting run-off. HSG53 The selection, use and maintenance of respiratory protective equipment, as amended. HSG97 A step by step guide to COSHH assessment. HSG140 Safe use and handling of flammable liquids. Working with ADR: An introduction to the carriage of dangerous goods by road. UK ENVIRONMENTAL REGULATING AGENCIES: England and Wales- Environment Agency; Scotland- Scottish Environment Protection Agency (SEPA); Northern Ireland- Environment and Heritage Service.
Classification procedures according to Regulation (EC) 1272/2008	Where there is no test data available for the mixture, the classification has been determined based on the individual component hazard data in accordance with EC 1272/2008.
Training advice	For further information please contact your supplier, Belzona consultant or Belzona direct.

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Revision comments	REVISION. This safety data sheet has been revised in the following Section(s): 2, 3, 4, 11, Please observe the REVISION DATE. Should you be reading a safety data sheet that is more than 24 months old or have concerns over its validity, please contact your local Belzona consultant or Belzona direct (sds@belzona.com) and the most current information will be sent to you.
Revision date	11/07/2018
Revision	6.5
SDS number	10574
SDS status	English. Approved.
Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H319 Causes serious eye irritation. H332 Harmful if inhaled. H336 May cause drowsiness or dizziness. H372 Causes damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects. H413 May cause long lasting harmful effects to aquatic life.