

CERCAFUGHE SPRAY

**GAS-CONTROL****Cercafughe spray**

Appositamente studiato per verificare l'ermeticità di impianti funzionanti con qualsiasi tipo di gas e con formula anticorrosiva su rame, ottone e acciaio. Conforme alla norma DIN EN 14291.

Eventuali fughe sono rilevate dalla formazione di bolle o schiuma.

Codice	Modello	Capacità	Q.tà Min.	Dimensioni	Peso
09001080	GAS CONTROL	400 ml	10	340 x 140 x 200 mm	4,8 kg

**32850 SURE CHECK****Cercafughe spray "Sure Check"**

- Gas rilevati: propano, metano, iso-butano, gas naturale, acetone, esano, acetilene,
- Formula per tutte temperature: da -48°C a 93°C (da -55°F a 200°F)
- Ultra sensibile; bolle di lunga durata
- Bolle fluorescenti per una migliore visibilità
- Non corrosivo, non tossico
- Utilizzabile con refrigeranti, gas naturali, propano e ossigeno

Codice	Modello	Capacità	Dimensioni	Peso
09001024	32850	473 ml	260 x 70 x 70 mm	0,6 kg

SPECCHIETTI TELESCOPICI

Rif	Codice	Modello	Descrizione	Dimensioni	Peso
A	08008052	WSR-2149	5 x 9 cm	410 x 80 x 30 mm	0,15 kg
B	08008024	WSR-2146	Ø5 da 21,5 a 45 mm	410 x 80 x 30 mm	0,15 kg

SPRAY LEAK DETECTOR



GAS-CONTROL

Spray leak detector

It is designed to test the hermetic sealing of systems using any type of gas. The liquid has a special formula against corrosion if used on copper, brass and steel. In conformity with DIN EN 14291.

It reveals any leak forming bubbles of foam.

Code	Model	Capacity	Min. Qty	Dimensions	Weight
09001080	GAS CONTROL	400 ml	10	340 x 140 x 200 mm	4,8 kg

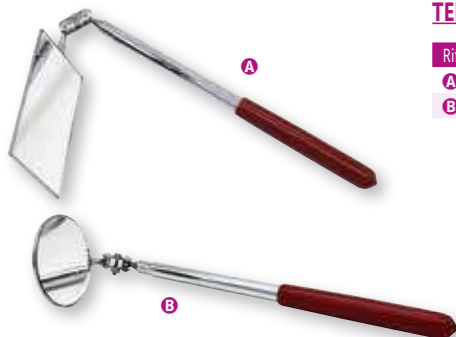


32850 SURE CHECK

"Sure Check" leak detector

- Gases detected: propane, methane, iso-butane, natural gas, acetone, acetylene.
- Formula for all temperatures: from -48°C to 93°C (from -55°F to 200°F).
- Ultra sensitive; long-lasting bubbles.
- Fluorescent bubbles for better visibility.
- Not corrosive, non-toxic.
- Can be used with refrigerants, natural gas, propane and oxygen.

Code	Model	Capacity	Dimensions	Weight
09001024	32850	473 ml	260 x 70 x 70 mm	0,6 kg



TELESCOPIC MIRRORS

Rif	Code	Model	Description	Dimensions	Weight
A	08008052	WSR-2149	5 x 9 cm	410 x 80 x 30 mm	0,15 kg
B	08008024	WSR-2146	Ø5 da 21,5 a 45 mm	410 x 80 x 30 mm	0,15 kg

10.6 Prodotti pericolosi di decomposizione

Per decomposizione termica o in caso di incendio si possono liberare gas e vapori potenzialmente dannosi alla salute, tossici o irritanti (ossidi di azoto, anilina, nitrobenzene, ossidi di carbonio).

11. INFORMAZIONI TOSSICOLOGICHE**11.1 Informazioni sugli effetti tossicologici**

Non sono disponibili dati tossicologici sulla miscela in quanto tale. Sono di seguito riportate le informazioni tossicologiche riguardanti le principali sostanze presenti nella miscela.

I tensioattivi contenuti in soluzione acquosa possono risultare irritanti per la pelle e per gli occhi.

Il protossido di azoto è una sostanza leggermente narcotica, anestetica ed asfissiante alle alte concentrazioni. Effetti da sovraesposizione: eccitazione, euforia, vertigini, sonnolenza, scoordinamento dei movimenti, narcosi, asfissia. Il suo potere anestetico si manifesta quando la concentrazione supera il 70% in volume.

Tossicità acuta

- Sabosol DOS 70: LD50 (Oral): > 200 mg/Kg Rat
- Sabosol L 30: LD50 (Oral): > 2000 mg/Kg Rat
- 1H-Benzotriazolo: LD50 (Oral): 560 mg/kg Rat
LD50 (Dermal): > 1000 mg/kg Rat
LC50 (Inhalation): 1,91 mg/l/3h Rat

Effetti acuti del 1H-Benzotriazolo (puro): il prodotto è nocivo se inalato e se ingerito; può provocare irritazione delle mucose e delle vie respiratorie superiori nonché degli occhi e della cute.

I sintomi di esposizione possono comprendere: bruciore ed irritazione agli occhi, alla bocca, al naso e alla gola, tosse, difficoltà respiratoria, vertigini, cefalea, nausea e vomito.

Nei casi più gravi l'inalazione del prodotto può provocare infiammazione ed edema della laringe e dei bronchi, polmonite chimica ed edema polmonare. Anche minime quantità ingerite possono provocare notevoli disturbi alla salute (dolore addominale, nausea, vomito, diarrea).

- Glicol etilenico: LD50 (Oral): 5500 mg/kg Mouse
LD50 (Oral): 4700 mg/kg Rat
LD50 (Dermal): 9530 ul/kg Rabbit
- Protossido di azoto: LC50 (Inhalation): > 250 ppm/4h Rat

12. INFORMAZIONI ECOLOGICHE

Utilizzare secondo le buone pratiche lavorative, evitando di disperdere il prodotto nell'ambiente.

12.1 Tossicità

Informazioni non disponibili.

12.2 Persistenza e degradabilità

I tensioattivi contenuti nella miscela risultano essere facilmente biodegradabili:

- Sabosol L30: biodegradabilità > 90%
- Sabosol DOS 70: biodegradabilità dopo 28 giorni = 66.7%, OECD 301D, COD ca 1400

Il benzotriazolo, presente nella miscela in basse concentrazioni, è caratterizzato dai seguenti parametri di tossicità per l'ambiente:

- tossicità acquatica: EC50/Dafnia/48h = 91 mg/l
- tossicità ai pesci: LC50/bluegill sunfish (*Lepomis macrochirus*)/96h: 25 mg/l; LC50/Brachydanio rerio (zebra fish): 100 mg/l
- tossicità sull'alga: EC50/*Scenedesmus quadricauda*/72h: 231 mg/l

- tossicità ai batteri: inibizione della respirazione da fanghi attivi: EC50: 1060 mg/l

In acqua il prodotto incrementa la concentrazione di tensioattivi e parametri legati a sostanze organiche. Se disperso in acque di scarico verificare il rispetto dei limiti di legge (D.Lgs 152/06 e s.m.i.)

12.3 Potenziale di bioaccumulo

1H-Benzotriazolo: nessun apprezzabile potenziale di bioaccumulazione (log Ko/w 1- 3).

12.4 Mobilità nel suolo

Informazioni non disponibili.

12.5 Risultati della valutazione PBT e vPvB.

Informazioni non disponibili.

12.6 Altri effetti avversi

Informazioni non disponibili.

13. OSSERVAZIONI SULLO SMALTIMENTO**13.1 Metodi di trattamento dei rifiuti**

Recuperare se possibile. Lo smaltimento deve essere affidato ad una società autorizzata alla gestione dei rifiuti, nel rispetto della normativa nazionale (D.Lgs. 152/2006 e s.m.i.) ed eventualmente locale.

Ove applicabili, si faccia riferimento alle seguenti normative: 91/156/CEE, 91/689/CEE, 94/62/CE e successivi adeguamenti.

IMBALLAGGI CONTAMINATI

Gli imballaggi contaminati devono essere inviati a recupero o smaltimento nel rispetto delle norme nazionali sulla gestione dei rifiuti (D.Lgs. 152/2006 e s.m.i.).

14. INFORMAZIONI SUL TRASPORTO

14.1. Numero ONU **1950**

14.2. Nome di spedizione dell'ONU **Aerosol**

14.3. Classi di pericolo connesso al trasporto **2.2**

14.4. Gruppo d'imballaggio **N.A.**

14.5. Pericoli per l'ambiente **N.A.**

14.6. Precauzioni speciali per gli utilizzatori **N.A.**

14.7. Trasporto di rinfuse secondo l'allegato II di MARPOL 73/78 ed il codice IBC **N.A.**

N.A.: non applicabile

Esenzione per unità di trasporto (1.1.3.6 ADR 2011) = categoria 2 = 333 Kg

Quantità limitate (3.4 ADR 2011) = 1 litro

Per usufruire della esenzione delle quantità limitate il prodotto deve essere:

- imballato in imballaggi esterni di massa lorda $\leq$ a 30 kg per collo

oppure

- imballato in vassoi con pellicola termoretraibile o estensibile di massa lorda $\leq$ a 20 kg per collo

SCHEDA DATI DI SICUREZZA

(secondo regolamenti (CE) 1272/2008 e (UE) 453/2010)

Scheda n. 4050 – Rev.4 del 11/12

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I "piccoli recipienti contenenti gas" (o in alternativa gli aerosol), con capacità non superiore a 50 ml, non sono sottoposti a nessun'altra disposizione ADR se contenenti soltanto componenti non tossici.

15. INFORMAZIONI SULLA NORMATIVA

15.1 Norme e legislazione su salute, sicurezza e ambiente specifiche per la sostanza o la miscela

Ove applicabili si faccia riferimento a:

- Circolari ministeriali 46 e 61 (Ammine aromatiche).
- D.Lgs. 21 settembre 2005 n. 238 (Direttiva Seveso Ter)
- Regolamento CE n. 648/2004 (Detergenti).
- D.M. 16 Gennaio 2004 n.44 (direttiva COV)

Categoria Seveso: Nessuna

Restrizioni di commercializzazione ed uso: nessuna restrizione secondo allegato XVII del Regolamento CE 1907/2006 (REACH) e s.m.i.

Sostanze in Candidate List (Art. 59 REACH): Nessuna.

Sostanze soggette ad autorizzazione (Allegato XIV REACH): Nessuna.

15.2 Valutazione sulla sicurezza chimica

Non è stata elaborata una valutazione di sicurezza chimica per la miscela e le sostanze in essa contenute.

16. ALTRE INFORMAZIONI

Testo delle indicazioni di pericolo (H) citate alle sezioni 2-3 della scheda

Acute Tox. 4 – Tossicità acuta, cat. 4

Eye Irrit. 2 – Lesioni oculari gravi / irritazione oculare, cat. 2

Skin Irrit. 2 – Irritazione della pelle, cat. 2

STOT SE 3 – Tossicità specifica per organi bersaglio - esposizione singola

Aquatic Chronic 3 – Pericoloso per l'ambiente acquatico, tossicità cronica cat. 3

Ox. Gas 1 – Gas comburenti, cat. 1

H270 – Può provocare o aggravare un incendio; comburente

H302 – Nocivo se ingerito

H315 – Provoca irritazione cutanea

H319 – Provoca grave irritazione oculare

H332 – Nocivo se inalato

H335 – Può irritare le vie respiratorie.

H412 – Nocivo per gli organismi acquatici con effetti di lunga durata

Testo delle frasi di rischio (R) citate alle sezioni 2-3 della scheda

Xn – Nocivo

Xi – Irritante

O – Comburente

R8 – Può provocare l'accensione di materie combustibili

R22 – Nocivo per ingestione

R20/22 – Nocivo per inalazione e ingestione

R36/38 – Irritante per gli occhi e la pelle

R36/37/38 – Irritante per gli occhi, le vie respiratorie e la pelle

R52/53 – Nocivo per gli organismi acquatici. Può provocare a lungo termine effetti negativi per l'ambiente acquatico

Informazioni sulla presente revisione

Ogni sezione della presente scheda è stata rivista per aggiornamento della normativa e delle informazioni inerenti la sicurezza e la salute dei lavoratori e dell'ambiente. In particolar modo:

- sono state riviste la classificazione e l'etichettatura per adeguamento al Regolamento CE 1272/2008;
- sono stati rivisti i contenuti e la forma richiesti per le Schede Dati di Sicurezza in funzione delle modifiche al Regolamento CE 1907/2006 intervenute con l'entrata in vigore del Regolamento UE 453/2010. La presente scheda è stata redatta secondo le indicazioni dell'allegato II del Regolamento UE 453/2010, in applicazione dell'art.2 (paragrafo 3) del Regolamento stesso.

Principali fonti dei dati utilizzati per redigere la scheda

- Direttiva 1999/45/CE e successive modifiche
- Direttiva 67/548/CEE e successive modifiche ed adeguamenti
- Direttiva Aerosol 1975/324/CE e successive modifiche ed adeguamenti
- Regolamento (CE) 1907/2006 del Parlamento Europeo (REACH)
- Regolamento (CE) 1272/2008 del Parlamento Europeo (CLP)
- Regolamento (CE) 790/2009 del Parlamento Europeo (I Atp. CLP)
- Regolamento (CE) 286/2011 del Parlamento Europeo (II Atp. CLP)
- Regolamento (CE) 618/2012 del Parlamento Europeo (III Atp. CLP)
- Regolamento (CE) 453/2010 del Parlamento Europeo
- The Merck Index. Ed. 10
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7 Ed., 1989
- ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities
- ACGIH - Threshold Limit Values - 2011 edition

Indicazioni sull'addestramento

Il personale addetto alla manipolazione ed all'uso del prodotto deve essere istruito circa i rischi specifici e le misure di sicurezza.

Riferimenti scritti: Vedi specifica istruzione tecnica riportata sul prodotto.

_____ :

Note per l'utilizzatore

Le informazioni contenute nella presente scheda si basano sulle nostre attuali conoscenze in materia di salute, sicurezza e ambiente; esse intendono consentire all'utilizzatore professionale del prodotto di individuare i comportamenti preventivi e protettivi utili ai fini di una operatività sicura.

L'utilizzatore del prodotto, preliminarmente ad impieghi diversi da quelli previsti, deve verificare se occorrono altre informazioni, sempre premesso il rispetto delle pertinenti norme di Legge e di buona pratica operativa.

Non si assumono responsabilità a riguardo di ogni uso improprio del prodotto.

Le caratteristiche menzionate non vanno considerate come garanzia di proprietà specifiche del prodotto.

L'etichetta o la scheda di sicurezza del prodotto va presentata ogniqualvolta si ricorre alle cure del medico.



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(based on regulations (EC) 1272/2008 and (EU) 453/2010)

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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1	Product identifier	
	Name	GAS CONTROL
	Registration No.	Not applicable (the product is a mixture): please refer to Section 3.2 for information related to constituent substances
1.2	Relevant identified uses of the substance or mixture	
	Description/use	Gas leak detector
1.3	Details of the supplier of the safety data sheet	
	Company name	WIGAM SpA
	Address and Country	Loc.Spedale 10/b, 52018 Italia
	Telephone	+39.05755011
	Fax	+39.05755011
	mail	info@wigam.com
1.4	Emergency telephone number	Tel. 02/64441 (24 h) Numeri telefonici dei principali Centri Antiveleni italiani (attivi 24/24 ore): Centro Antiveleni di Milano 02 66101029 (CAV Ospedale Niguarda Ca' Granda - Milano) Centro Antiveleni di Pavia 0382 24444 (CAV IRCCS Fondazione Maugeri - Pavia) Centro Antiveleni di Bergamo 800 883300 (CAV Ospedali Riuniti - Bergamo) Centro Antiveleni di Firenze 055 7947819 (CAV Ospedale Careggi - Firenze) Centro Antiveleni di Roma 06 3054343 (CAV Policlinico Gemelli - Roma) Centro Antiveleni di Roma 06 49978000 (CAV Policlinico Umberto I - Roma)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

The product is classified as hazardous according to directives 67/548/EEC and 1999/45/EC, and CLP Regulation CE 1272/2008 (as amended). Therefore an MSDS as per regulation EC 1907/2006, as amended, is required for this product.

2.1.1 As per CLP Regulation EC 1272/2008, as amended

Hazard classification and indicators:

Skin Irrit. 2 H315
Eye Irrit. 2 H319
STOT SE 3 H335

2.1.2 As per European Directive 67/548/EEC, Directive 1999/45/EC, as amended

Hazard Symbols: Xi

R phrases: R36/37/38

For the full text of both the risk phrases (R) and the hazard indicators (H), see Section 16.

2.2 Label elements

Pictograms



Warning

Caution

Hazard indicators:

H315

Causes skin irritation

H319

Causes serious eye irritation

H335

May cause respiratory irritation

Caution advices:

P102

Keep away from children

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352

IF ON SKIN: Wash with soap and water

P332+P313

IF SKIN IRRITATION OR A RASH OCCURS: get medical advice/attention

P304+P340

IF INHALED: remove victim to fresh air and keep at rest in a position 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.

2.3 Other hazards

Information not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixtures

Identifier	Concentration (% weight)	CAS number	EC number	EC index number	67/548/EEC Classification	1272/2008 Classification (CLP)
Sabosol L30 (surfactant) <i>It contains: 30-40% Sodium lauroyl sarcosinate</i> Preregistration No. Expiry date 31/12/2013	9	137-16-6	205-281-5	-	Xi R36/38	Eye Irrit. 2 H319, Skin Irrit. 2 H315
Sabosol DOS 70 (Emulsifier) <i>It contains: 70-80% sodium diisooctyl sulfosuccinate, 3-5% ethylene glycol</i> Preregistration No. Expiry date 31/12/2013	4.5	577-11-7	209-406-4	-	Xi R36/37/38, Xn R22	Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335
Dinitrogen monoxide Reg. date not expired	1	10024-97-2	233-032-0	-	O R8	Ox. Gas 1 H270



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1H-Benzotriazol Preregistration No. Expiry date 31/08/2018	0.3	95-14-7	202-394-1	-	Xn R20/22 R36 R52/53	Acute Tox. 4 H332 H302, Eye Irrit. 2 H319, Aqu. Chronic 3 H412
Water	85.2	7732-18-5	-	-	-	-

For the full text of both the risk phrases (R) and the hazard indicators (H), see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

- Eye contact: Immediately and abundantly wash with running water with eyelids open for at least 10 minutes, then protect dry eyes with a sterile gauze or a clean handkerchief. If necessary, ask for eye specialist's advice.
- Skin contact: Take off contaminated clothes. Abundantly wash with mild soap and water. Seek medical help should the irritation persist.
- Ingestion: In case of accidental ingestion, seek medical help (the product contains surfactants and 1H-Benzotriazol). Induce vomiting only after medical indication in this sense. Do not give any oral medication if the subject is unconscious or if the physician did not authorize to do so. It is possible to give activated carbon suspended in water or medicinal mineral oil.
- Inhalation: ventilate the room. Immediately remove the exposed person from the contaminated background and keep at rest in a well ventilated place. Seek medical help in case of disorder.

4.2 Most important symptoms and effects, both acute and delayed

For symptoms and effects due to the substances contained, please refer to Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

Follow the physician's advice.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: carbon dioxide, foam, chemical dust, and nebulised water.

Unsuitable extinguishing media: none.

5.2 Special hazards arising from the substance or mixture

In event of fire, do not breathe the combustion fumes (carbon oxides, toxic pyrolysis products, etc.). 1H-Benzotriazol breaks down by heating. Cracking organic products (aniline, nitrobenzene), harmful gases, carbon oxides, and nitric gases may arise from the combustion of Benzotriazol. Keep receptacles cool. Dinitrogen monoxide may generate toxic or irritating fumes/gases (NO, NO₂).

5.3 Advice for firefighters

In case of fire, use an approved self-contained breathing apparatus (EN 137 type), gloves and emergency protective clothes).



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6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

The product is packed in a small pressurized cartridge. Apart from accidents, accidental leaks that can lead to emergency situations are unlikely. The product is not flammable at room temperature. Provide a suitable ventilation of the workplace. Do not smoke. Wear protective mask, gloves, and clothes. It contains dinitrogen monoxide. Ventilate the rooms in which it is used (refer to Section 10).

6.2 Environmental precautions

The product increments the concentration of surfactants and parameters related to organic substances in water (COD). Curb the leakage, and prevent any liquid residues from getting into the superficial waters and the sewers. Should the product have run into a stream, sewage, or have contaminated either soil or vegetation, notify the competent authorities. Please refer to Sections 12 and 13.

6.3 Methods and material for containment and cleaning up

Stem the leaks, if abundant, with porous materials (sand, earth, etc.). Collect the material in adequate containers and dispose in accordance with the waste legislation in force (Italian Legislative Decree 152/06, as amended). Further to collection, wash both the area and the concerned materials with water. Please refer to Sections 12 and 13.

6.4 Reference to other sections

Any information about personal protection and disposal are available in Sections 8 and 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Product packed in pressurized cartridge. Do not expose to sunshine or to temperature above 50°C. Avoid contact and vapour inhalation. Provide a suitable ventilation of the workplace (also refer to Section 8). Do not eat, drink or smoke while using the product.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well ventilated place. Protect receptacles from bumps and handle them with care. Avoid stocking them next to fuel gas receptacles(also refer to Section 10).

7.2 Specific end uses

End uses other than those indicated in subsection 1.2 are not recommended.

Please refer to technical instructions for a safe use of the product (see Section 16).

8. PERSONAL PROTECTION EXPOSURE CONTROL

8.1 Control parameters

Professional exposure limits (ACGIH, 2011)

- Ethylene glycol: VLE-8 hrs = 52 mg/m³
VLE-Short term = 104 mg/m³, skin = 40 ppm
TLV-C = 100 mg/m³ = 39.39 ppm, A4
MAK = 26 mg/m³
- Dinitrogen monoxide: TLV-TWA = 50 ppm, 90 mg/m³

Legend of notes:

VLE- 8 hrs= concentration of the pollutant for an eight-hour working day.

VLE-short term = limit value above which exposition shall be avoided. Unless otherwise specified, it refers to a period of 15 minutes.

TLV-TWA. (Threshold Limit Value - Time-Weighted Average) = average time-weighted concentration on a conventional eight-hour working day and on 40 working hours per week, to which workers are assumed to be repeatedly exposed, day



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by day, for a whole working life, without negative effects.

TLV-STEL (Threshold Limit Value – Short Time Exposition Limit) = concentration to which workers are assumed to be continuously exposed for short time without arisings of irritation, chronic or irreversible tissue damage and reduction of alertness.

MAK (Maximum Allowed Concentration) = is the maximum concentration of a chemical substance (gases, vapors or airborne particles) in working environment that does not give adverse effects to for a long time exposed people (8 daily hours or 40 weekly hours).

8.2 Exposure controls

8.2.1 Professional exposure control

Assess risks according to Italian Legislative Decree 81/2008, as amended. The following protective equipment is indicated, with specifications by the manufacturer of protective equipment:

- for the respiratory tract: in case of inadequate ventilation or prolonged exposure, wear a mask with an AP filter. When the product is used in a close place, ventilate adequately.
- for the hands: wear rubber or plastic gloves (refer to UNI EN 374).
- for the eyes: wear safety goggles.
- for the skin: wear clothes which entirely protect the skin.

8.2.2 Environmental exposure control

Please refer to the environmental pollution regulation in force - Italian Legislative Decree 03/04/2006, No. 152 as amended.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Liquid foamy
Colour	Opalescent white
Odour	Lightly scented
Odour threshold	N/A (not available)
pH	7-8
Melting or freezing point	< 0 °C
Boiling point	> 100 °C
Distillation range	N/A (not available)
Flash point	Non inflammable product Sabosol DOS 70: > 150°C 1H-Benzotriazol: 212°C
Evaporation rate	N/A (not available)
Flammability of solids and gases	not inflammable
Lower flammability limit	not inflammable
Upper flammability limit	not inflammable
Lower explosion limit	N/A (not available)
Upper explosion limit	N/A (not available)
Vapour pressure	N/A (not available)
Vapour density	N/A (not available)
Relative density	N/A (not available) Sabosol DOS 70: 1,080-1,100 Sabosol L30: 1.04 Specific weight N/A (not available) 1H-Benzotriazol: 1,190 kg/l Dinitrogen monoxide: 1,226 kg/l
Solubility	almost completely soluble in water



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Fat solubility

Sabosol DOS 70: partially soluble

Partition coefficient: n-octanol/water:

Sabosol L30: soluble in vegetal oils

N/A (not available)

Auto-ignition temperature.

1H-Benzotriazol: 1.44

Decomposition temperature.

Dinitrogen monoxide: 0.36

Viscosity;

No auto-ignition

Oxidizing properties

N/A (not available)

N/A (not available)

N/A (not available)

1H-Benzotriazol: 20°C BZ 1 = no ignition (VDI 2263),

100°C BZ 2 = short and quick ignition

Dinitrogen monoxide: oxidizer

NB. The evidence of not-inflammability of the mixture are contained in test report nr. 201204435 of 15.10.2012 issued by Stazione Sperimentale dei Combustibili of San Donato Milanese.

9.2 Other information

None.

10. STABILITY AND REACTIVITY

10.1 Reactivity

There are no particular hazards as for reaction with other substances at normal use conditions.

1H-Benzotriazol: decomposes at 160°C.

10.2 Stability

The product is stable at normal use and storage conditions.

10.3 Possibility of hazardous reactions

None in particular.

10.4 Conditions to avoid

Avoid overheating, electrostatic discharges, and ignition sources.

Dinitrogen monoxide helps the combustion of other substances: do not expose to open flames or sparks – do not smoke.

The so composed product has been put through inflammability tests according to CE 2008/47 and has turned out to be not-inflammable.

10.5 Incompatible materials

Dinitrogen monoxide may strongly react with flammables and reducing agents generating a danger of fire and explosion. The gas is a strong oxidizer over 300°C and it may create explosive mixtures with ammonia, carbon monoxide, hydrogen sulphide, oil, grease, and fuels.

The so composed product has been put through inflammability tests according to CE 2008/47 and has turned out to be not-inflammable.

10.6 Hazardous decomposition products

Potentially hazardous for health, toxic or irritant gas or vapours (nitrogen oxides, aniline, nitrobenzene, carbon oxides) may be released by thermal decomposition or in event of fire.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

There are no toxicological data available concerning the mixture as it is. Here is a list of the toxicological data concerning the main substances of the mixture.



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The surfactants contained in water solution may be irritant for skin and eyes.

The dinitrogen monoxide is a slightly narcotic, anaesthetic, and asphyxiating substance at high concentrations. Overexposure effects: excitement, euphoria, vertigo, drowsiness, uncoordinated movements, narcosis, asphyxiation. Its anaesthetic potential shows itself when the concentration exceeds 70% in volume.

Acute toxicity

- Sabosol DOS 70: LD50 (Oral): > 200 mg/Kg Rat
- Sabosol L 30: LD50 (Oral): > 2000 mg/Kg Rat
- 1H-Benzotriazol: LD50 (Oral): 560 mg/kg Rat
LD50 (Dermal): > 1000 mg/kg Rat
LC50 (Inhalation): 1.91 mg/l/3h Rat

Acute effects of 1H-Benzotriazol (pure): the product is harmful if inhaled or ingested. It may cause irritation of the mucosae, the respiratory tract, as well as of eyes and skin.

The exposure symptoms may include: tingle and irritation of eyes, mouth, nose, and throat; cough; respiratory distress; vertigo; headache; nausea; vomit.

In the more serious cases, the inhalation of the product may cause inflammation and edema of larynx and bronchial tubes, chemical pneumonia, and pulmonary edema. Ingested quantities, even if very modest, may cause important disorders (stomach pain, nausea, vomit, diarrhoea).

- Ethylene glycol: LD50 (Oral): 5500 mg/kg Mouse
LD50 (Oral): 4700 mg/kg Rat
LD50 (Dermal): 9530 ul/kg Rabbit
- Dinitrogen monoxide: LC50 (Inhalation): > 250 ppm/4hrs Rat

12. ECOLOGICAL INFORMATION

Use according to the working good practices, avoiding litter.

12.1 Toxicity

Information not available.

12.2 Persistence and degradability

The surfactants contained in the mixtures appear to be easily biodegradable:

- Sabosol L30: biodegradability > 90%
- Sabosol DOS 70: biodegradability after 28 days = 66.7%, OECD 301D, COD approx. 1400

The Benzotriazol, which is present in the mixture at low concentrations, is characterized by the following parameters of toxicity for the environment:

- water toxicity: EC50/Dafnia/48h = 91 mg/l
- toxicity to fishes: LC50/bluegill sunfish (*Lepomis macrochirus*)/96hrs: 25 mg/l; LC/Brachydanio rerio (zebra fish): 100 mg/l
- toxicity to alga: EC50/Scenedesmus quadricauda/72hrs: 231 mg/l
- toxicity to bacteria: respiratory inhibition using activated sludge: EC50: 1060 mg/l

The product increments the concentration of surfactants and parameters related to organic substances in water. If dispersed in waste water, verify the compliance with the limit provided for by the law (Italian Legislative Decree 152/06, as amended)

12.3 Bioaccumulative potential

1H-Benzotriazol: no significant bioaccumulative potential (log Kow 1- 3).

12.4 Mobility in soil

Information not available.



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12.5 Results of PBT and vPvB assessment

Information not available.

12.6 Other adverse effects

Information not available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recycle if possible. The disposal shall be assigned to a company with the authorization to manage wastes, in accordance with the national legislation (Italian Legislative Decree 152/2006, as amended) and in case with the local legislation.

Where applicable, refer to the following regulations: 91/156/EEC, 91/689/EEC, 94/62/EC as amended.

CONTAMINATED PACKING

Contaminated packing shall be destined to either recycling or disposal in compliance with the national regulation concerning waste management (Italian Legislative Decree 152/2006, as amended).

14. TRANSPORT INFORMATION

- 14.1 UN Number 1950
- 14.2 UN shipping name "Aerosol"
- 14.3 Transport danger class 2.2
- 14.4 Packaging group N.A.
- 14.5 Environment dangers N.A.
- 14.6 Special cautions for users N.A.
- 14.7 Bulk transport according to attachment II of MARPOL 73/78 and to code IBC N.A.

N.A. not applicable

Exemptions related to quantities carried per transport unit (1.1.3.6 ADR 2011) = category 2 = 333 Kg

Limited quantities (3.4 ADR 2011) = 1 litre

To take advantage of the exemption related to the limited quantities, the product shall be:

- packed in external package with a gross mass $\leq$ than 30 kg per parcel

or

- packed in tray with either shrinking or stretch film with a gross mass $\leq$ than 20 kg per parcel



The "small receptacles containing gas" (or alternatively the aerosols), whose capacity does not exceed 50 ml, are not subject to any other ADR disposition provided that they contain non toxic components only.

15. REGULATORY INFORMATION

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

Where applicable, refer to:



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- Italian ministerial circulars No. 46 and 61 (Aromatic amines).
- Italian Legislative Decree no. 238 dated 21 September 2005 (Seveso Ter Directive)
- Regulation EC No. 648/2004 (Detergents).
- Italian Ministerial Decree No dated 16 January 2004 (VOC Directive)

Seveso category: None

Restrictions on placing on the market and use: no restrictions based on Annex XVII to the Regulation EC 1907/2006 (REACH), as amended

Substances in Candidate List (Art. 59 REACH): None.

Substances subject to authorization (Annex XIV REACH): None.

15.2 Chemical safety assessment

A chemical safety assessment has not been elaborated for this mixtures nor for the substance it contains.

16. OTHER INFORMATION

Text of the hazard indicators (H) mentioned in Sections 2 and 3 of this data sheet

Acute Tox. 4 – Acute toxicity, cat. 4
Eye Irrit. 2 – Severe eye lesions / eye irritation, cat. 2
Skin Irrit. 2 – Skin irritation, cat. 2
STOT SE 3 – Toxicity specific for target organs - single exposure
Aquatic Chronic 3 – Hazardous for water environment, chronic toxicity cat. 3
Ox. Gas 1 – Comburent gases, cat. 1
H270 – May cause or intensify fire; oxidizer
H302 – Harmful if swallowed
H315 – Causes skin irritation
H319 – Causes serious eye irritation
H332 – Harmful if inhaled
H335 – May cause respiratory irritation.
H412 – Harmful to aquatic life with long lasting effects

Text of the risk phrases (R) mentioned in Sections 2 and 3 of this Data Sheet

Xn – Harmful
Xi – Irritating
O – Oxidizer
R8 – Contact with combustible material may cause fire
R22 – Harmful if swallowed
R20/22 – Harmful by inhalation and if swallowed
R36/38 – Irritating to eyes and skin
R36/37/38 – Irritating to eyes, respiratory system, and skin
R52/53 – Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment

Indications concerning this revised version

Each section of this data sheet has been revised due to the updating of the regulation and the information concerning safety and health of workers and environment. In particular:

- classification and labelling have been revised to comply with Regulation EC 1272/2008;
- form and substance required for Safety Data Sheets have been revised in accordance with changes to Regulation EC 1907/2006 occurred when the Regulation EU 453/2010 came into effect. This Data Sheet



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has been written in compliance with the provisions of Annex II to Regulation EU 453/2010, pursuant to art. 2 (paragraph 3) of the same Regulation.

Main literature references and sources for data

- Directive 1999/45/EC, as amended
- Directive 67/548/EEC, as amended
- Aerosol Dispensers Directive 1975/324/EC, as amended
- European Parliament Regulation (EC) 1907/2006 (REACH)
- European Parliament Regulation (EC) 1272/2008 (CLP)
- European Parliament Regulation (EC) 790/2009 (I Atp. CLP)
- European Parliament Regulation (CE) 286/2011 (II Atp. CLP)
- European Parliament Regulation (CE) 618/2012 (III Atp. CLP)
- European Parliament Regulation (EC) 453/2010
- The Merck Index. Ed. 10
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7 Ed., 1989
- ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities
- ACGIH - Threshold Limit Values - 2011 edition

Advice on training

Staff in charge of handling and using the product must be trained on specific risks and safety measures.

Written references: Please refer to technical instructions indicated on the product

Notes for users

The information provided in this Data Sheet are based on our present knowledge about safety, health and environment. It aims at enabling the professional user of the product to identify both preventive and protective measures for safe operations.

The user of the product, prior to use the product for purposes different from the ones indicated, shall verify whether further information is needed, provided the relevant legislation and the operational good practice.

No liability is accepted for any improper or incorrect usage of the product.

The features mentioned shall not be considered as warranty of specific properties of the product.

Always present either the label or the Data Sheet of the product when consulting a physician.