Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code: PSB-VN20FW
Product name **FS01 WHITE**

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

Intended use **Solvent based**

Identified Uses	Industrial	Professional	Consumer
Painting for horizontal road signs	-	ERC: 8d. PROC: 10, 11, 19, 5, 8a. PC: 9a.	

Uses Advised Against

Any use other than those identified on this sheet.

1.3. Details of the supplier of the safety data sheet

Name **PRISMO ROAD MARKINGS LIMITED (trading as Ennis-Flint)**
Full address **5 Drumhead road Chorley North Industrial Park**
District and Country **CHORLEY, Lancashire**
PR67BX United Kingdom (UK)

Tel. +44 (0) 1257 225 100

Fax +44 (0) 1772 443 947

e-mail address of the competent person
responsible for the Safety Data Sheet **info@ennisflint.com**

málning

Söluaðili: Málning hf.
Dalvegur 18
201 Kópavogur
Ísland
Sími: 580 6000
Netfang: oryggisblod@malning.is

Neyðarlínan: Sími 112
Eitrunarmiðstöð Landsspítalans. Sími: 543222

1.4. Emergency telephone number

For urgent inquiries refer to

+44 (0) 1257 225 100 Prismo Road
(Only avaible office Monday/Friday hours 08.30 to 17.00 English Language)
NPIS Active 24 hours
England and Wales - dial 111
Scotland - dial 111
Republic of Ireland – 01 809 216

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 (EU) Regulation 2015/830.
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:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Reproductive toxicity, effects on or via lactation	H362	May cause harm to breast-fed children.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.
Hazardous to the aquatic environment, acute toxicity, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 1	H410	Very toxic to aquatic life with long lasting effects.

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:

H226	Flammable liquid and vapour.
H362	May cause harm to breast-fed children.
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.
EUH208	Contains:, METHYL METHACRYLATE, N-BUTIL METHACRYLATE, May produce an allergic reaction.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust / fume / gas / mist / vapours / spray.
P201	Obtain special instructions before use.
P263	Avoid contact during pregnancy and while nursing.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P370+P378	In case of fire: extinguish with water spray, foam, chemical powder, carbon dioxide (CO2).

Contains: C-14-17 CLORINATED PARAFFINS
N-BUTYL ACETATE
METHYL ETHYL KETONE
NAPHTHA (PETROL.) HYDROTREATED HEAVY

Product not intended for uses provided for by Dir. 2004/42/CE.

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%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
N-BUTYL ACETATE		
CAS 123-86-4	10 ≤ x < 15	Flam. Liq. 3 H226, STOT SE 3 H336, EUH066
EC 204-658-1		
INDEX 607-025-00-1		
Reg. no. 01-2119485493-29		
TITANIUM DIOXIDE		
CAS 13463-67-7	5 ≤ x < 9	
EC 236-675-5		
INDEX -		
Reg. no. 01-2119489379-17		
METHYL ETHYL KETONE		
CAS 78-93-3	5 ≤ x < 9	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
EC 201-159-0		
INDEX 606-002-00-3		
Reg. no. 01-2119457290-43		
NAPHTHA (PETROL.) HYDROTREATED HEAVY		
CAS 64742-48-9	3 ≤ x < 4	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H336, EUH066, Classification note according to Annex VI to the CLP Regulation: P
EC 265-150-3		
INDEX 649-327-00-6		
Reg. no. 01-2119463258-33-XXXX		
C-14-17 CLORINATED PARAFFINS		
CAS 85535-85-9	2 ≤ x < 3	Lact. H362, Aquatic Acute 1 H400 M=100, Aquatic Chronic 1 H410 M=100, EUH066
EC 287-477-0		
INDEX 602-095-00-X		
Reg. no. 01-2119519269-33		
METHYL METHACRYLATE		
CAS 80-62-6	0,1 ≤ x < 0,2	Flam. Liq. 2 H225, Skin Irrit. 2 H315, STOT SE 3 H335, Skin Sens. 1 H317, Classification note according to Annex VI to the CLP Regulation: D
EC 201-297-1		
INDEX 607-035-00-6		
Reg. no. 01-2119452498-28		
N-BUTIL METHACRYLATE		
CAS 97-88-1	0,1 ≤ x < 0,2	Flam. Liq. 3 H226, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Skin Sens. 1 H317, Classification note according to Annex VI to the CLP Regulation: D
EC 202-615-1		
INDEX 607-033-00-5		
Reg. no. 01-2119486394-28		

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

TITANIUM DIOXIDE
Substance not classified as dangerous according to Regulation (EC) no. 1272/2008 (CLP) but with a workplace exposure limit.

SECTION 4. First aid measures

4.1. Description of first aid measures

To avoid being exposed, rescuers must wear the PPE specified and described in section 8 before intervening.
Immediately remove contaminated, impregnated clothing and put it in a safe place.
The rescuer must have individual protection.
Inhalation: Keep at rest, aerate with clean air; if symptoms persist or if there are any doubts, consult a doctor.
Eyes Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses.
Immediate medical help is required.
Skin: Wash off immediately with soap and plenty of water.
If symptoms persist or if there are any doubts, consult a doctor.
Ingestion Call a physician immediately; do not induce vomiting without medical advice.

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

Cough, nausea, vomiting, headache, unconsciousness, labored breathing, dizziness, narcosis.
Exceptional danger Pulmonary edema, consequences on the S.N.C.
Prolonged contact with the skin can damage it and produce dermatitis.

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

Notes to physician: treat symptomatically.

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING MEANS
The extinguishing media are: carbon dioxide, foam, chemical powder.
For leaks and spills of the product that have not been ignited, nebulized water can be used to disperse the flammable vapors and protect the committed people to stop the leak.
UNSUITABLE EXTINGUISHING MEDIA
Do not use jets of water.
The water is not effective to extinguish the fire, however it can be used to cool the closed containers exposed to the flame preventing fires and explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS DUE TO EXPOSURE IN THE EVENT OF FIRE
Overpressure can be created in containers exposed to fire with danger of explosion.
Avoid breathing combustion products.

5.3. Advice for firefighters

GENERAL INFORMATIONS
Cool the containers with water jets to prevent product decomposition and the development of substances potentially dangerous for health.
Always wear full fire protection equipment.
Collect the extinguishing waters that must not be discharged into the drains.
Dispose of contaminated water used for extinction and fire residue according to current regulations.
EQUIPMENT
Normal fire fighting clothing, such as an open circuit compressed air breathing apparatus (EN 137), flame retardant (EN469), flame retardant gloves (EN 659) and fire brigade boots (HO A29 or A30).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For those who do not intervene directly

The following indications are directed to the duly trained personnel working in the plant units in which the substance is normally used and are intended to ensure, when this is possible without risk, the preliminary safety operations before leaving and waiting for the substance. emergency team intervention.
Stop the loss if the operation does not involve risks.
Remove persons not involved in the emergency intervention from the area affected by spillage.
Where possible operate above wind.
The vapors that develop are toxic, flammable and heavier than air and therefore tend to stratify downwards, they could also trigger well away from the point of release and cause a flashback.
Eliminate all possible sources of ignition.

For those who intervene directly

The following indications are addressed to expert personnel such as the personnel belonging to the emergency team and, for this purpose, specially trained; they are added to the indications referred to in the point relating to personnel who do not intervene directly; the same personnel refer to the indications relating to environmental precautions and to methods of containment and reclamation.
Precautionary use of the special fire-fighting equipment specified in Section 5.
All equipment used during the operation must be grounded.
Use anti-static clothing and equipment during operations.
The use of filming foams can be effective.

6.2. Environmental precautions

Plant systems and operating procedures must be used to prevent the product from reaching the sewage system, wells or watercourses.
The release of the spill into closed sewer lines or collection in closed containers must be avoided to reduce the risk of confined explosions.
Break down the vapors with water spray.

6.3. Methods and material for containment and cleaning up

Cover leaks with special materials such as butadiene-acrylonitrile copolymers to suppress the vapors.
Collect the spilled material with anti-spark equipment.
Wash the floor with water after collecting the spill.
Introduce the collected material into clean and labeled containers.
If the spillage takes place in water, remove the liquid from the surface with an explosion-proof or manual pump or with a suitable absorbent material.
If necessary, start the remediation procedure provided for by Legislative Decree 152/2006, Part IV, Title V.
Cleaning products based on strong oxidants should not be used.

6.4. Reference to other sections

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

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and open flames, do not smoke or use matches or lighters.
Vapors can ignite with explosion, therefore accumulation must be avoided by keeping doors and windows open and ensuring cross ventilation. Without adequate ventilation, the vapors can accumulate on the ground and ignite even at a distance, if ignited, with the risk of backfire.
Avoid the accumulation of electrostatic charges.
Connect to an earth outlet in the case of large packagings during the transfer operations and wear antistatic shoes. The strong agitation and the vigorous flow of the liquid in the pipes and equipment can cause the formation and accumulation of electrostatic charges. To avoid the risk of fire and explosion, never use compressed air when handling.
Open the containers carefully, because they can be under pressure.
Do not eat, drink or smoke during use.
Avoid dispersal of the product in the environment.

7.2. Conditions for safe storage, including any incompatibilities

FOR OUTDOOR USE
Frequency of use: up to 300 days / year.
Environment of use: outdoor use.
Operating temperature: Ambient temperature (+ 15 ° C / + 25 ° C).
Other operating conditions that influence worker exposure: implement an adequate workplace hygiene standard. Take into account Occupational Exposure Limits including biological exposure indicators.
Organizational measures to avoid / limit spills, dispersion and exposure: consider technical progress and process updating (including automation) for the elimination of emissions.
Make sure operators are trained to minimize exposure.
Make sure that the ventilation system is regularly subjected to maintenance and operational verification.
Ensure the minimization of the manual phases.
Eliminate spills immediately.
Maintain a good level of general cleanliness.
Conditions and measures related to personal protection, hygiene and health evaluation: wear the PPE indicated in section 8 of the safety data sheet.

7.3. Specific end use(s)

Reference Section 1.2.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

DEU	Deutschland	TRGS 900 - Seite 1 von 69 (Fassung 29.03.2019)- Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
ESP	España	LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST)
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Third edition,published 2018)
ITA	Italia	DIRETTIVA (UE) 2017/164 DELLA COMMISSIONE del 31 gennaio 2017
PRT	Portugal	Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diário da República, 1.ª série - N.º 111 - 11 de junho de 2018
EU	OEL EU	Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2019

N-BUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	300	62	600 (C)	124 (C)	
VLA	ESP	724	150	965	200	
VLEP	FRA	710	150	940	200	
WEL	GBR	724	150	966	200	
TLV-ACGIH			50		150	

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,18	mg/l
Normal value in marine water	0,018	mg/l
Normal value for fresh water sediment	0,981	mg/kg
Normal value for marine water sediment	0,0981	mg/kg

Normal value for water, intermittent release	0,36	mg/l
Normal value of STP microorganisms	35,6	mg/l
Normal value for the terrestrial compartment	0,0903	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral	VND	2 mg/kg	VND	2 mg/kg	VND	VND	VND	VND
Inhalation	600 mg/m3	600 mg/m3	35,7 mg/m3	35,7 mg/m3	600 mg/m3	600 mg/m3	300 mg/m3	300 mg/m3
Skin	VND	6 mg/kg	VND	6 mg/kg	VND	6 mg/kg	VND	11 mg/kg

TITANIUM DIOXIDE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	10				
VLEP	FRA	10				
WEL	GBR	4				RESP
WEL	GBR	10				INHAL
TLV-ACGIH		10				

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,184	mg/l
Normal value in marine water	0,0184	mg/l
Normal value for fresh water sediment	1000	mg/kg/d
Normal value for marine water sediment	100	mg/kg/d
Normal value for water, intermittent release	0,193	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the food chain (secondary poisoning)	100	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				700 mg/kg/d				
Inhalation							10 mg/m3	

METHYL ETHYL KETONE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	600	200	600	200	SKIN
MAK	DEU	600	200	600	200	SKIN
VLA	ESP	600	200	900	300	
VLEP	FRA	600	200	900	300	SKIN
WEL	GBR	600	200	899	300	SKIN
VLEP	ITA	600	200	900	300	
VLE	PRT	600	200	900	300	

OEL	EU	600	200	900	300	
TLV-ACGIH		590	200	885	300	

NAPHTHA (PETROL.) HYDROTREATED HEAVY

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	DEU	300	50	600	100	
MAK	DEU	300	50	600	100	
MAK	DEU	300	50	600	100	

C-14-17 CLORINATED PARAFFINS

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
AGW	DEU	6	0,3	48	2,4	INHAL	11
AGW	DEU	6	0,3	48	2,4	SKIN	11

N-BUTIL METHACRYLATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	210	50	420	100	
MAK	DEU	210	50	420	100	
VLA	ESP		50		100	
VLEP	FRA	205	50	410	100	
WEL	GBR	208	50	416	100	
VLEP	ITA		50		100	
OEL	EU		50		100	
TLV-ACGIH		205	50	410	100	

METHYL METHACRYLATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	210	50	420 (C)	100 (C)	
MAK	DEU	210	50	420	100	
VLA	ESP		50		100	
VLEP	FRA	205	50	410	100	
WEL	GBR	208	50	416	100	
VLEP	ITA		50		100	
VLE	PRT		50		100	
OEL	EU		50		100	
TLV-ACGIH		205	50	410	100	

Health - Derived no-effect level - DNEL / DMEL

Effects on consumers	Effects on workers

Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			210 mg/m3				210 mg/m3	
Skin			13,67 mg/kg/d				13,67 mg/kg/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

The use of appropriate technical measures should always take priority over personal protective equipment (PPE). Personal protective equipment must bear the CE marking which certifies their compliance with current standards. Provide emergency shower with visocular tray. Manage personal protective equipment in such a way as to ensure maximum protection (e.g. reduction of replacement times). Based on the activities carried out, follow the technical measures described below.
Distribution and storage of the product with occasional controlled exposure: no specific measures.
Duration of the daily exposure: up to 15 minutes (sampling).
Transfer of the product and preparation including loading of the machines: use drum transfer pumps or pour carefully from the container. Wear the PPE shown below.
Duration of daily exposure: up to 1 hour.
Automated or manual spray application: Wear the PPE shown below.
Duration of the daily exhibition: up to 4 hours.
Automated or manual application by brush / roller: Wear the PPE shown below.
Duration of daily exposure: up to 8 hours.
Film formation. Air drying: Make sure the operation is performed externally.
Completely empty the equipment before entering or performing maintenance.
Wear the PPE shown below.
Duration of daily exposure: up to 1 hour.
Collection and storage of waste pending delivery: store washing solutions and product residues in closed containers pending disposal. When handling waste, wear the PPE shown below.
Duration of daily exposure: up to 1 hour.
HAND PROTECTION
Protect your hands with category III work gloves (ref. Standard EN 374). Suitable gloves (protection factor 6, breakthrough time> 480 minutes).
Material (thickness, mm): polyvinyl alcohol-PVA (0.3 mm), PE / EVOH laminate (0.06 mm) or equivalent.
PROTECTION OF THE SKIN
Wear category II professional long-sleeved overalls and safety footwear (ref. Directive 89/686 / EEC and standard EN ISO 20344). Wash with soap and water after removing protective clothing. Evaluate the opportunity to provide antistatic clothing if the work environment presents an explosion hazard.
EYE PROTECTION
Wear airtight protective glasses (ref. Standard EN 166).
RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) of the substance or one or more substances present in the product is exceeded, it is advisable to wear a mask with type A filter combined with a type P2 filter or higher whose limit of use will be defined by the manufacturer (ref. Standard EN 14387). If gases or vapors of a different nature were present, combined filters should be provided. The use of respiratory protection means is necessary in case of insufficient technical measures adopted to limit the worker exposure to the threshold values taken into consideration. The protection offered by the masks is however limited. In the event that the substance is odorless or its olfactory threshold is higher than the relative TLV-TWA and in the event of an emergency, wear an open circuit compressed air breathing apparatus (ref. Standard EN 137) or an air intake respirator. external (ref. Standard EN 138).
For the correct choice of the respiratory protection device, refer to EN 529.
ENVIRONMENTAL EXPOSURE CONTROL
Containment and disposal of liquid waste produced on the site. Treat waste water to ensure a reduction efficiency greater than 93.3%. Do not distribute the sludge produced by the wastewater treatment plants on the ground.
Waste treatment and disposal must comply with local / national legislation.
The collection and / or recycling of waste must be carried out only by specialized companies authorized in accordance with local / national legislation.

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.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid	
Colour	white	
Odour	Fruity aromatic	
Odour threshold	Not available	
pH	Not applicable	Remark:Solvent-based paint
Melting point / freezing point	< -90 °C	Substance:N-BUTYL ACETATE
Initial boiling point	79 °C	Substance:METHYL ETHYL KETONE
Boiling range	Not available	
Flash point	27 °C	Substance:N-BUTYL ACETATE
Evaporation Rate	1 (BUAC = 1) ; 12 (Ether)	Substance:N-BUTYL ACETATE
Flammability of solids and gases	Not available	
Lower inflammability limit	Not available	
Upper inflammability limit	Not available	
Lower explosive limit	1 % (V/V)	Remark:% (V/V) Substance:METHYL ETHYL KETONE Temperature:20°C
Upper explosive limit	11 % (V/V)	Remark:% (V/V) Substance:METHYL ETHYL KETONE Temperature:20°C
Vapour pressure	10 hPa	Substance:METHYL ETHYL KETONE Temperature:20°C
Vapour density	Not available	Substance:N-BUTYL ACETATE
Relative density	1,60 – 1,62 g/cm3	
Solubility	insoluble in water, soluble in the main organic solvents	
Partition coefficient: n-octanol/water	2,3 log Kow	Substance:N-BUTYL ACETATE
Auto-ignition temperature	404 °C	Substance:METHYL ETHYL KETONE
Decomposition temperature	Not available	
Viscosity	>20,5 mm2/sec (40°C)	
Explosive properties	it is not classified as explosive	
Oxidising properties	Not classified as an oxidant	

9.2. Other information

Molecular weight	116,16	Substance:N-BUTYL ACETATE
VOC (Directive 2010/75/EC) :	22,71 % - 363,36 g/litre	
VOC (volatile carbon) :	15,02 % - 240,25 g/litre	

SECTION 10. Stability and reactivity

10.1. Reactivity

N-BUTYL ACETATE
Decomposes on contact with: water.

METHYL ETHYL KETONE

Reacts with: light metals,strong oxidants.Attacks various types of plastic materials.Decomposes under the effect of heat.

10.2. Chemical stability

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

C-14-17 CLORINATED PARAFFINS
SADT >200°C/392°F.

10.3. Possibility of hazardous reactions

N-BUTYL ACETATE
Risk of explosion on contact with: strong oxidising agents.May react dangerously with: alkaline hydroxides,potassium tert-butoxide.Forms explosive mixtures with: air.

METHYL ETHYL KETONE
May form peroxides with: air,light,strong oxidising agents.Risk of explosion on contact with: hydrogen peroxide,nitric acid,sulphuric acid.May react dangerously with: oxidising agents,trichloromethane,alkalis.Forms explosive mixtures with: air.

METHYL METHACRYLATE
May polymerise on contact with: ammonia,organic peroxides,persulphates.Risk of explosion on contact with: dibenzoyl peroxide,diterbutyl peroxide,propionaldehyde.May react dangerously with: strong oxidising agents.Forms explosive mixtures with: air.

10.4. Conditions to avoid

N-BUTYL ACETATE
Avoid exposure to: moisture,sources of heat,naked flames.

METHYL ETHYL KETONE
Avoid exposure to: sources of heat.

METHYL METHACRYLATE
Avoid exposure to: heat,UV rays.Avoid contact with: oxidising substances,reducing substances,acids,bases.

10.5. Incompatible materials

N-BUTYL ACETATE
Incompatible with: water,nitrates,strong oxidants,acids,alkalis,zinc.

METHYL ETHYL KETONE
Incompatible with: strong oxidants,inorganic acids,ammonia,copper,chloroform.

10.6. Hazardous decomposition products

METHYL METHACRYLATE
When heated to decomposition releases: harsh fumes,zinc alloys.

SECTION 11. Toxicological information

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.
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.

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

N-BUTYL ACETATE

WORKERS: inhalation; contact with the skin.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

N-BUTYL ACETATE

In humans, the substance's vapours cause irritation of the eyes and nose. In the event of repeated exposure, skin irritation, dermatitis (dryness and cracking of the skin) and keratitis appear.

Interactive effects

N-BUTYL ACETATE

A case of acute intoxication been reported involving a 33 year old worker while cleaning a tank with a preparation containing xylenes, butyl acetate and ethylene glycol acetate. The person had irritation of the conjunctiva and upper respiratory tract, drowsiness and motor coordination disorders, which disappeared within 5 hours. The symptoms are attributed to poisoning by mixed xylenes and butyl acetate, with a possible synergistic effect responsible for the neurological effects. Cases of vacuolar keratitis are reported in workers exposed to a mixture of butyl acetate and isobutanol vapours, but with uncertainty concerning the responsibility of a particular solvent (INRC, 2011).

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:
Not classified (no significant component)
LD50 (Oral) of the mixture:
Not classified (no significant component)
LD50 (Dermal) of the mixture:
Not classified (no significant component)

TITANIUM DIOXIDE

LD50 (Oral) > 5000 mg/kg Ratto/Rat
LD50 (Dermal) > 5000 mg/kg Coniglio/Rabbit
LC50 (Inhalation) > 6,8 mg/l/4h Ratto/Rat

METHYL METHACRYLATE
LD50 (Oral) > 5000 mg/kg Ratto/Rat
LD50 (Dermal) > 5000 mg/kg Coniglio/Rabbit
LC50 (Inhalation) 29,8 mg/l/4h Ratto/Rat

METHYL ETHYL KETONE
LD50 (Oral) 2737 mg/kg Rat
LD50 (Dermal) 6480 mg/kg Rabbit
LC50 (Inhalation) 23,5 mg/l/8h Rat

N-BUTYL ACETATE
LD50 (Oral) > 10760 mg/kg Ratto, Rat
LD50 (Dermal) > 14112 mg/kg Coniglio, Rabbit

LC50 (Inhalation) 20 mg/l/4h

NAPHTHA (PETROL.) HYDROTREATED HEAVY
LD50 (Oral) > 5000 mg/kg Rat
LD50 (Dermal) > 2000 mg/kg Rabbit

C-14-17 CLORINATED PARAFFINS
LD50 (Oral) > 4000 mg/kg Rat - Wistar
LC50 (Inhalation) > 48,17 mg/l Rat

SKIN CORROSION / IRRITATION

Repeated exposure may cause skin dryness or cracking.

METHYL METHACRYLATE

Species: Rabbit / Rabbit
Result: non-irritating - slightly irritating
Remarks: in case of prolonged and / or frequent contact with the skin, irritation cannot be excluded
Skin irritation Category 2 (UN-GHS).

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

METHYL METHACRYLATE

Species: Rabbit / Rabbit
Result: non-irritating - slightly irritating.

RESPIRATORY OR SKIN SENSITISATION

May produce an allergic reaction.Contains:METHYL METHACRYLATE

N-BUTIL METHACRYLATE
METHYL METHACRYLATE

Species: Mouse
Result: possible skin sensitization
Method: OECD TG 429
Human allergic reactions have been observed with different incidence (symptoms: head pains, eye irritation, skin diseases)
Remarks: Skin sensitization Category 1B (UN-GHS).

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY
Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

May cause harm to breast-fed children.

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

METHYL METHACRYLATE

Rat: inhalative, 2 years
Outcome: mucosal lesions in the nose at 400 ppm NOAEL 25 ppm
Rat: in drinking water, 2 years
Outcome: no toxic effect NOAEL 2000 ppm.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class Viscosity: >20,5 mm2/sec (40°C)

SECTION 12. Ecological information

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

TITANIUM DIOXIDE	
LC50 - for Fish	> 1000 mg/l/96h Cavedano americano
EC50 - for Crustacea	> 1000 mg/l/48h Daphnia magna (Pulce d'acqua grande)
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Pseudokirchneriella subcapitata (alghe cloroficee)
METHYL METHACRYLATE	
LC50 - for Fish	> 79 mg/l/96h Oncorhynchus mykiss, (trota iredea) OCSE 203, scorrimento GLP:GLP
EC50 - for Crustacea	69 mg/l/48h Daphnia magna OCSE 202, scorrimento
EC50 - for Algae / Aquatic Plants	> 110 mg/l/72h Selenastrum capricornutum, OCSE 201
Chronic NOEC for Fish	9,4 mg/l Danio rerio, pesce zebra Metodo OECD210, fish early life stage test, analisi propria
Chronic NOEC for Crustacea	37 mg/l Daphnia magna, OCSE parte 2, scorrimento, durata dell'esposizione 21 d
N-BUTYL ACETATE	
LC50 - for Fish	18 mg/l/96h Pimephales promelas (Cavedano americano)
EC50 - for Crustacea	44 mg/l/48h Daphnia Magna
EC50 - for Algae / Aquatic Plants	397 mg/l/72h Desmodesmus subspicatus
Chronic NOEC for Crustacea	23,2 mg/l mg/l/21g Daphnia magna
Chronic NOEC for Algae / Aquatic Plants	196 mg/l Selenastrum capricornutum (alghe)
NAPHTHA (PETROL.) HYDROTREATED HEAVY	
LC50 - for Fish	8,2 mg/l/96h Pimephales promelas

EC50 - for Crustacea	4,5 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	3,1 mg/l/72h Pseudokirchnerella subcapitata

C-14-17 CLORINATED PARAFFINS

LC50 - for Fish	> 5000 mg/l/96h Alburnus alburnus
EC50 - for Crustacea	0,0077 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 3,2 mg/l/72h Pseudokirchnerella subcapitata

12.2. Persistence and degradability

TITANIUM DIOXIDE

Solubility in water	< 0,001 mg/l

Degradability: information not available

N-BUTIL METHACRYLATE

Solubility in water	15300 mg/l

Rapidly degradable

METHYL ETHYL KETONE

Solubility in water	> 10000 mg/l

Rapidly degradable

N-BUTYL ACETATE

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

NAPHTHA (PETROL.) HYDROTREATED HEAVY
Rapidly degradable

C-14-17 CLORINATED PARAFFINS

Solubility in water	< 0,1 mg/l

Rapidly degradable

12.3. Bioaccumulative potential

TITANIUM DIOXIDE
It does not accumulate in organisms.

METHYL METHACRYLATE

Partition coefficient: n-octanol/water	1,38

N-BUTIL METACRILATO

Partition coefficient: n-octanol/water	1,38

METHYL ETHYL KETONE

Partition coefficient: n-octanol/water	0,3

N-BUTYL ACETATE

Partition coefficient: n-octanol/water	2,3
BCF	15 Calculated value

C-14-17 CLORINATED PARAFFINS

Partition coefficient: n-octanol/water	7,2

12.4. Mobility in soil

TITANIUM DIOXIDE
La sostanza non è mobile nel suolo.

METHYL METHACRYLATE

Partition coefficient: soil/water	0,94

N-BUTIL METHACRYLATE

Partition coefficient: soil/water	0,94

N-BUTYL ACETATE

Partition coefficient: soil/water	1,27

NAPHTHA (PETROL.) HYDROTREATED HEAVY

Partition coefficient: soil/water	1,78

C-14-17 CLORINATED PARAFFINS

Partition coefficient: soil/water	5

12.5. Results of PBT and vPvB assessment

TITANIUM DIOXIDE
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

TITANIUM DIOXIDE
No specific adverse effects are known.

SECTION 13. Disposal considerations

The appropriate management of the waste of the mixture and / or its container must be determined in accordance with the provisions of Directive 2008/98 / EC and subsequent amendments, taking into account Regulation (EU) no. 1357/2014 and of the Decision (EU) no. 955/2014.
Waste management methods must be assessed on a case-by-case basis, in relation to the composition of the waste itself.

13.1. Waste treatment methods

Reuse if possible.
Waste management is performed without endangering human health and without harming the environment and in particular without creating risks for water, air, soil, fauna or flora.
Do not dispose of waste in sewers or waste channels.
Product residues must be disposed of according to current regulations.
The transport of waste must also be carried out in compliance with the provisions of the regulations on the transport of dangerous goods.
CONTAMINATED PACKAGING.

The generation of waste should be avoided or minimized wherever possible.
Incineration and landfilling should only be considered when recycling is not practicable.
Keep the label (s) on the packaging.
Deliver to an authorized waste management entity.
Containers and packaging contaminated with substances or preparations must be treated like the product and sent for recovery or disposal in compliance with national regulations on waste management.
EUROPEAN WASTE CODE.
The legislation on waste does not allow the identification of CER codes for waste containing the substance / preparation referred to in this document, as they must be identified in accordance with Annex D to Part IV of Legislative Decree 192/06 based on information not available before using the product.
DANGER CHARACTERISTICS FOR WASTE.
With reference to Regulation (EU) no. 1357/2014, the hazard characteristics for the intact product are:
HP3
Flammable

SECTION 14. Transport information

14.1. UN number

ADR / RID, IMDG, IATA:	1263

14.2. UN proper shipping name

ADR / RID:	PAINT
IMDG:	PAINT (C-14-17 CLORINATED PARAFFINS)
IATA:	PAINT

14.3. Transport hazard class(es)

ADR / RID:	Class: 3	Label: 3
IMDG:	Class: 3	Label: 3
IATA:	Class: 3	Label: 3

14.4. Packing group

ADR / RID, IMDG, IATA:	III

14.5. Environmental hazards

ADR / RID:	Environmentally Hazardous
IMDG:	Marine Pollutant
IATA:	NO

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 30	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special Provision: -		
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Pass.:	Maximum quantity: 60 L	Packaging instructions: 355
	Special Instructions:	A3, A72, A192	

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

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: P5c-E1

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

Product
Point 3 - 40

Substances in Candidate List (Art. 59 REACH)
On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

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

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances

N-BUTYL ACETATE

N-BUTIL METACRILATO

METHYL METHACRYLATE

This safety data sheet contains one or more Exposure Scenarios in an integrated form. Contents have been included in sections 1.2, 8, 9, 12, 15 and 16 of this safety data sheet.

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
Lact.	Reproductive toxicity, effects on or via lactation
Asp. Tox. 1	Aspiration hazard, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitization, category 1
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H362	May cause harm to breast-fed children.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Use descriptor system:

ERC	**8d**	Widespread use of non- reactive processing aid (no inclusion into or onto article, outdoor)
LCS	**PW**	Widespread use by professional workers
PC	**9a**	Coatings and paints, thinners, paint removers
PROC	**10**	Roller application or brushing
PROC	**11**	Non industrial spraying
PROC	**19**	Manual activities involving hand contact
PROC	**5**	Mixing or blending in batch processes
PROC	**8a**	Transfer of substance or mixture (charging and discharging) at non- dedicated facilities

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).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 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
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
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14. Regulation (EU) 2018/669 (XI Atp. CLP)
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16. Regulation (EU) 2019/521 (XII Atp. CLP)
- 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
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Product`s classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12.

The data for evaluation of chemical-physical properties are reported in section 9.

This information was obtained from the consolidation of the exposure scenarios available for the relevant substances contained in the mixture using the LCID (Lead Component IDentification Methodology) method proposed by CEFIC (REACH Practical Guide on Safe Use Information for Mixtures under REACH, Final version 6.1 -
February 2016). The principle behind this method is that the safe use of a mixture is established by the substances that contributed to its CLP (Lead Components) classification.
It follows that by adopting the operational conditions and risk management measures identified for the relevant scenarios of the Lead Component (s) the use of the mixture should be considered safe.

Guide for downstream users to assess whether they are making safe use of the mixture:
When the operating conditions and risk management measures described are adopted the use of the mixture is considered safe. If additional risk management measures or operating conditions are used, operators should ensure that risks are limited to an equivalent or higher level.

Changes to previous review:
The following sections were modified:
01 / 08 / 09.