SAFETY DATA SHEET

Version #: 06
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture	Insulcast 140 FR - Part A
Registration number	-
Synonyms	None.
SKU#	IE208R

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

Identified uses	Not available.
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Company Name	ITW Performance Polymers
Address	Bay 150 Shannon Industrial Estate Co. Clare Ireland V14 DF82
Contact Person	Customer Service
Telephone Number	353(61)771500 353(61)471285
Email	customerservice.shannon@itwpp.com
Emergency Phone Number	44(0) 1235 239 670 (24 hours)

1.4. Emergency telephone number

General in EU	112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Austria National Poisons Information Center	+431 406 4343 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Belgium National Poisons Control Center	070 245 245 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Bulgaria National Toxicological Information Center	+359 2 9154 233 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Croatia Poisons Information Center	+385 1 2348 342 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
Cyprus Poison Center	1401 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Czech Republic National Poisons Information Center	+420 224 919 293, or +420 224 915 402 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
Denmark National Poisons Control Center	+45 82 12 12 12 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Estonia National Poisons Information Center	16662 or abroad: (+372) 626 9390 (Monday 9:00AM to Saturday 9:00AM (closed on Sundays and on national holidays). SDS/Product information may not be available for the Emergency Service.)
Finland National Poison Information Center	(09) 471 977 (direct) or (09) 4711 (exchange) (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
France National Poisons Control Center	ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

1.4. Emergency telephone number

Greece Poison Information Centre	(0030) 2107793777 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Hungary National Emergency Phone Number	+36-80-201-199 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Iceland Poison Center	(+354) 543 2222 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Latvia Emergency medical aid	113
Latvia Poison and Drug Information Center	+371 67042473 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Lithuania Neatidėliotina informacija apsinuodijus	+370 5 236 20 52 or +37068753378 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
Malta Accident and Emergency Department	2545 4030 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
Netherlands National Poisons Information Center (NVIC)	NVIC: +31 (0)88 755 8000 (Only for the purpose of informing medical personnel in cases of acute intoxications)
Norway Norwegian Poison Information Center	22 59 13 00 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Portugal Poison Center	800 250 250 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Romania Biroul RSI si Informare Toxicologica	021.318.36.06 (Available 8:00AM-3:00PM. SDS/Product information may not be available for the Emergency Service.)
Slovakia National Toxicological Information Center	+421 2 5477 4166 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Spain Toxicology Information Service	+ 34 91 562 04 20 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Sweden National Poison Information Center	112 - and ask for Poison Information (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Switzerland Tox Info Suisse	145 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Acute toxicity, dermal	Category 4	H312 - Harmful in contact with skin.
Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Skin sensitization	Category 1	H317 - May cause an allergic skin reaction.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 2	H411 - Toxic to aquatic life with long lasting effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

UFI:

Austria: 1K15-71FY-G00N-EGFG
Belgium: 1K15-71FY-G00N-EGFG
Bulgaria: 1K15-71FY-G00N-EGFG
Croatia: 1K15-71FY-G00N-EGFG
Cyprus: 1K15-71FY-G00N-EGFG
Czech Republic: 1K15-71FY-G00N-EGFG
Denmark: 1K15-71FY-G00N-EGFG
Estonia: 1K15-71FY-G00N-EGFG
EU: 1K15-71FY-G00N-EGFG
Finland: 1K15-71FY-G00N-EGFG
France: 1K15-71FY-G00N-EGFG
Germany: 1K15-71FY-G00N-EGFG
Greece: 1K15-71FY-G00N-EGFG
Hungary: 1K15-71FY-G00N-EGFG
Iceland: 1K15-71FY-G00N-EGFG
Ireland: 1K15-71FY-G00N-EGFG
Italy: 1K15-71FY-G00N-EGFG
Latvia: 1K15-71FY-G00N-EGFG
Lithuania: 1K15-71FY-G00N-EGFG
Luxembourg: 1K15-71FY-G00N-EGFG
Malta: 1K15-71FY-G00N-EGFG
Netherlands: 1K15-71FY-G00N-EGFG
Norway: 1K15-71FY-G00N-EGFG
Poland: 1K15-71FY-G00N-EGFG
Portugal: 1K15-71FY-G00N-EGFG
Romania: 1K15-71FY-G00N-EGFG
Slovakia: 1K15-71FY-G00N-EGFG
Slovenia: 1K15-71FY-G00N-EGFG
Spain: 1K15-71FY-G00N-EGFG
Sweden: 1K15-71FY-G00N-EGFG

Contains: Aluminium Oxide, butyl glycidyl ether; butyl 2,3-epoxypropyl ether, Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers, reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)

Hazard pictograms

Signal word Warning

Hazard statements

H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P261	Avoid breathing mist/vapors.
P264	Wash thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear eye protection/face protection.
P280	Wear protective gloves/protective clothing.

Response

P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Storage Not available.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information 99,33% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment.

2.3. Other hazards This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The mixture does not contain any substances included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties at a concentration equal to or greater than 0.1% by weight.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Aluminium Oxide	60 - 100	1344-28-1 215-691-6	-	-	
Classification: -					
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	10 - 30	25068-38-6 500-033-5	-	603-074-00-8	
Classification: Skin Irrit. 2;H315, Eye Irrit. 2;H319, Skin Sens. 1;H317, Aquatic Chronic 2;H411					
Specific Concentration Limits: Skin Irrit. 2;H315: C ≥ 5 %, Eye Irrit. 2;H319: C ≥ 5 %					
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	10 - < 20	25085-99-8 -	01-2119456619-26-0000	-	
Classification: Skin Irrit. 2;H315, Eye Irrit. 2;H319, Skin Sens. 1;H317					
butyl glycidyl ether; butyl 2,3-epoxypropyl ether	1 - 5	2426-08-6 219-376-4	-	603-039-00-7	
Classification: Flam. Liq. 3;H226, Acute Tox. 4;H302;(ATE: 500 mg/kg bw), Acute Tox. 3;H311;(ATE: 788 mg/kg bw), Acute Tox. 4;H332;(ATE: 11 mg/l), Skin Sens. 1;H317, Muta. 2;H341, Carc. 2;H351, STOT SE 3;H335, Aquatic Chronic 3;H412					
Other components below reportable levels	10 - 30				

List of abbreviations and symbols that may be used above

ATE: Acute toxicity estimate.
M: M-factor
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.
#: This substance has been assigned Union workplace exposure limit(s).
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

4.1. Description of first aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.

For emergency responders Keep unnecessary personnel away. Ensure adequate ventilation. Avoid breathing mist/vapors. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

6.4. Reference to other sections For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

ANNEX 1, PART 1 Categories of dangerous substances
Hazard categories in accordance with Regulation (EC) No 1272/2008
- E2 Hazardous to the Aquatic Environment Chronic (Lower-tier requirements = 200 tons; Upper-tier requirements = 500 tons)

7.3. Specific end use(s) Observe industrial sector guidance on best practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	MAK	5 mg/m3	Respirable fraction.
		5 mg/m3	Respirable fume.
		10 mg/m3	Inhalable fraction.
	STEL	20 mg/m3	Inhalable fraction.
		10 mg/m3	Respirable fume.

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended

Components	Type	Value	Form
		10 mg/m3	Respirable fraction.

Belgium. OEL. Exposure Limit Values to Chemical Substances at Work, Code of Well-being at work, Book VI, Title 1 - Chemical agents, as amended

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	1 mg/m3	Respirable fraction.
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	TWA	16,2 mg/m3	
		3 ppm	

Bulgaria. OELs. Ordinance No 13 on protection of workers against risks of exposure to chemical agents at work, as amended

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	10 mg/m3	Inhalable fraction.
		1,5 mg/m3	Respirable fraction.

Croatia. OELs (GVI). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and Biological Limit Values, Annex I (NN 91/2018), as amended

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	MAC	4 mg/m3	Respirable dust.
		10 mg/m3	Total dust.
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	MAC	3 ppm	

Czech Republic. Occupational exposure limit values of chemicals at work (Decree on protection of health at work, 361/2007, Annex 2, Part A & Annex 3, Part A, as amended)

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	0,1 mg/m3	Respirable dust.

Denmark. Work Environment Authority. Exposure Limits for Substances & Materials, Annex 2

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TLV	5 mg/m3	Total
		2 mg/m3	Respirable.
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	TLV	30 mg/m3	
		6 ppm	

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	4 mg/m3	Fine dust, respiratory fraction
		10 mg/m3	Total dust.
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	STEL	80 mg/m3	
		15 ppm	
	TWA	50 mg/m3	
		10 ppm	

Finland. HTP-arvot, App 3., Binding Limit Values, Social Affairs and Ministry of Health

Components	Type	Value
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	STEL	140 mg/m3
		25 ppm

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value
Aluminium Oxide (CAS 1344-28-1)	VME	10 mg/m3
Regulatory status: Indicative limit (VL)		
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	VME	135 mg/m3
Regulatory status: Indicative limit (VL)		
		25 ppm
Regulatory status: Indicative limit (VL)		

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG), as updated

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	4 mg/m3	Inhalable dust.
		1,5 mg/m3	Respirable dust.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	AGW	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.

Greece. OELs, Presidential Decree No. 307/1986, as amended

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Inhalable
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	TWA	135 mg/m3	
		20 ppm	

Hungary. OELs. Decree on protection of workers exposed to chemical agents (5/2020. (II.6)), Annex 1&2, as amended

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	5 mg/m3	
		2 mg/m3	Respirable.

Iceland. OELs. Regulation 390/2009 on Pollution Limits and Measures to Reduce Pollution at the Workplace, as amended

Components	Type	Value
Aluminium Oxide (CAS 1344-28-1)	TWA	10 mg/m3
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	TWA	30 mg/m3
		6 ppm

Ireland. OELVs, Schedules 1 & 2, Code of Practice for Chemical Agents and Carcinogens Regulations

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Total inhalable dust.

Ireland. OELVs, Schedules 1 & 2, Code of Practice for Chemical Agents and Carcinogens Regulations

Components	Type	Value	Form
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	TWA	3 ppm	

Italy. OELs (Legislative Decree n.81, 9 April 2008), as amended

Components	Type	Value
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	TWA	3 ppm

Latvia. OELs. Occupational Exposure Limits of Chemical Substances at Workplace (Reg. No. 325/ 2007, L.V. 80, Annex 1), as amended

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	6 mg/m3	Decomposition aerosol.
		4 mg/m3	

Lithuania. OELs. Occupational Exposure Limit Values for Chemical Substances (Hygiene Norm HN 23:2011; Order No. V-824/A1-389), as amended

Components	Type	Value
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	STEL	80 mg/m3
		15 ppm
	TWA	50 mg/m3
		10 ppm

Norway. Regulation No. 1358 on Measures and Limit Values for Physical and Chemical Factors in Work Environment and Infection Groups for Biological Factors, as amended

Components	Type	Value
Aluminium Oxide (CAS 1344-28-1)	TLV	10 mg/m3
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	TLV	27 mg/m3
		5 ppm

Poland. Maximum permissible concentrations and intensities of harmful factors in the work environment (Dz.U.Poz. 1286/2018, Annex 1)

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	2,5 mg/m3	Inhalable fraction.
		1,2 mg/m3	Respirable fraction.
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	STEL	60 mg/m3	
	TWA	30 mg/m3	

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796-2014)

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	1 mg/m3	Respirable fraction.
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	TWA	3 ppm	

Romania. OELs. Limit Values of Chemical Agents at Workplace (Regulation 1.218/2006, M.O 845, Annex 1, 3&4, as amended)

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	STEL	5 mg/m3	Aerosol.
	TWA	2 mg/m3	Aerosol.

Romania. OELs. Limit Values of Chemical Agents at Workplace (Regulation 1.218/2006, M.O 845, Annex 1, 3&4, as amended)

Components	Type	Value	Form
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	STEL	200 mg/m3	
		38 ppm	
	TWA	100 mg/m3	
		19 ppm	

Slovakia. OELs. Maximum permissible exposure limits for chemical factors in workplace air (Regulation No 355/2006, Annex 1, Table 1, as amended)

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	4 mg/m3	Inhalable fraction.
		0,1 mg/m3	Respirable fraction.

Slovenia. OELs. Occupational Exposure Limits of Chemicals at Workplace (Reg. on Protection of Workers from Risks due to Exp. to Chemicals at Work, Annex I), as amended

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.

Spain. OELs. INSST, Límites de Exposición Profesional Para Agentes Químicos, Table 1-Valores Límites Ambientales (VLAs)

Components	Type	Value
Aluminium Oxide (CAS 1344-28-1)	TWA	10 mg/m3
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	TWA	16 mg/m3
		3 ppm

Sweden. OELs (Annex 1). Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2018:1), as amended

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	5 mg/m3	Total dust.
		2 mg/m3	Respirable dust.
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	STEL	80 mg/m3	
		15 ppm	
	TWA	50 mg/m3	
		10 ppm	

Switzerland. SUVA Grenzwerte am Arbeitsplatz: Aktuelle MAK-Werte

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	STEL	24 mg/m3	Respirable dust and/or fume.
	TWA	3 mg/m3	Respirable dust.
		3 mg/m3	Respirable dust and/or fume.
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	STEL	270 mg/m3	
		50 ppm	
	TWA	135 mg/m3	
		25 ppm	

UK. OELs. Workplace Exposure Limits (WELs) (EH40/2005 (Fourth Edition 2020)), Table 1

Components	Type	Value	Form
Aluminium Oxide (CAS 1344-28-1)	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Inhalable dust.

Biological limit values

Hungary. BELs. Decree on protection of workers exposed to chemical agents (5/2020. (II.6)), Annex 3&4, as amended

Components	Value	Determinant	Specimen	Sampling Time
Aluminium Oxide (CAS 1344-28-1)	0,25 µmol/mmol	Aluminum	Creatinine in urine	*
	0,06 mg/g	Aluminum	Creatinine in urine	*

* - For sampling details, please see the source document.

Switzerland. SUVA Grenzwerte am Arbeitsplatz: Aktuelle BAT-Werte

Components	Value	Determinant	Specimen	Sampling Time
Aluminium Oxide (CAS 1344-28-1)	50 µg/g	Aluminium	Creatinine in urine	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

Exposure guidelines

Austria MAK: Skin designation

butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6) Can be absorbed through the skin.

Belgium OELs: Skin designation

butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6) Can be absorbed through the skin.

Germany DFG MAK (advisory): Skin designation

butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6) Can be absorbed through the skin.

Ireland Exposure Limit Values: Skin designation

butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6) Can be absorbed through the skin.

Italy OELs: Skin designation

butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6) Danger of cutaneous absorption

Portugal VLEs Norm on Occupatioinal Exposure: Skin designation

butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6) Can be absorbed through the skin.

Spain OELs: Skin designation

butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6) Can be absorbed through the skin.

Switzerland SUVA Limit Values at the Workplace: Skin designation

butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6) Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear safety glasses with side shields (or goggles). Face shield is recommended.

Skin protection

- Hand protection	Wear appropriate chemical resistant gloves.
- Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.
Environmental exposure controls	Inform appropriate managerial or supervisory personnel of all environmental releases. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Form	Liquid.
Color	Black.
Odor	Slight.
Melting point/freezing point	Not available.
Boiling point or initial boiling point and boiling range	608 °F (320 °C) estimated
Flammability	Not applicable.
Flash point	265,0 °F (129,4 °C) estimated
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
pH	Not available.
Kinematic viscosity	Not available.
Solubility	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water) (log value)	Not available.
Vapor pressure	Not available.
Density and/or relative density	
Density	2,42 g/cm3
Vapor density	Not available.
Particle characteristics	Not available.

9.2. Other information

9.2.1. Information with regard to physical hazard classes	No relevant additional information available.

9.2.2. Other safety characteristics

Specific gravity	2,42

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidizing agents.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.

Skin contact	Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity Harmful in contact with skin. Harmful in contact with skin.

Components	Species	Test Results
Aluminium Oxide (CAS 1344-28-1)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg
butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)		
Acute		
Dermal		
LD50	Rabbit	0,788 g/kg

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Risk of cancer cannot be excluded with prolonged exposure.

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)

IARC Monographs. Overall Evaluation of Carcinogenicity

butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	2B Possibly carcinogenic to humans.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Not applicable.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.
Mixture versus substance information	No information available.

11.2. Information on other hazards

Endocrine disrupting properties	This mixture does not contain any substances having endocrine disrupting properties with respect to human health as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	Toxic to aquatic life with long lasting effects. Based on available data, the classification criteria are not met for hazardous to the aquatic environment, acute hazard.
12.2. Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

butyl glycidyl ether; butyl 2,3-epoxypropyl ether	0,63

Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.

12.5. Results of PBT and vPvB assessment	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.
12.6. Endocrine disrupting properties	This mixture does not contain any substances having endocrine disrupting properties with respect to the environment as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.
12.7. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700))
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Hazard No. (ADR)	90
Tunnel restriction code	E
14.4. Packing group	III
14.5. Environmental hazards	Yes
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number	UN3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700))
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
14.4. Packing group	III
14.5. Environmental hazards	Yes
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number	UN3082
14.2. UN proper shipping name	Environmentally Hazardous Liquid, N.o.s. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700))
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
14.4. Packing group	III
14.5. Environmental hazards	Yes
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

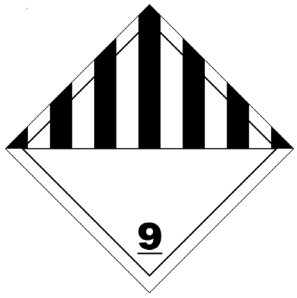
14.1. UN number	UN3082
14.2. UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700))
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	Yes
ERG Code	9L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

14.1. UN number	UN3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)), MARINE POLLUTANT
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

14.7. Maritime transport in bulk according to IMO instruments Not established.

ADN; ADR; IATA; IMDG; RID



Marine pollutant

General information IMDG Regulated Marine Pollutant.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Aluminium Oxide (CAS 1344-28-1)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

UFI:

Austria: 1K15-71FY-G00N-EGFG
Belgium: 1K15-71FY-G00N-EGFG
Bulgaria: 1K15-71FY-G00N-EGFG
Croatia: 1K15-71FY-G00N-EGFG
Cyprus: 1K15-71FY-G00N-EGFG
Czech Republic: 1K15-71FY-G00N-EGFG
Denmark: 1K15-71FY-G00N-EGFG
Estonia: 1K15-71FY-G00N-EGFG
EU: 1K15-71FY-G00N-EGFG
Finland: 1K15-71FY-G00N-EGFG
France: 1K15-71FY-G00N-EGFG
Germany: 1K15-71FY-G00N-EGFG
Greece: 1K15-71FY-G00N-EGFG
Hungary: 1K15-71FY-G00N-EGFG
Iceland: 1K15-71FY-G00N-EGFG
Ireland: 1K15-71FY-G00N-EGFG
Italy: 1K15-71FY-G00N-EGFG
Latvia: 1K15-71FY-G00N-EGFG
Lithuania: 1K15-71FY-G00N-EGFG
Luxembourg: 1K15-71FY-G00N-EGFG
Malta: 1K15-71FY-G00N-EGFG
Netherlands: 1K15-71FY-G00N-EGFG
Norway: 1K15-71FY-G00N-EGFG
Poland: 1K15-71FY-G00N-EGFG
Portugal: 1K15-71FY-G00N-EGFG
Romania: 1K15-71FY-G00N-EGFG
Slovakia: 1K15-71FY-G00N-EGFG
Slovenia: 1K15-71FY-G00N-EGFG
Spain: 1K15-71FY-G00N-EGFG
Sweden: 1K15-71FY-G00N-EGFG

Authorizations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended - Conditions of restriction given for the associated entry number should be considered

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended

butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

ANNEX 1, PART 1 Categories of dangerous substances
Hazard categories in accordance with Regulation (EC) No 1272/2008
- E2 Hazardous to the Aquatic Environment Chronic

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended. Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

Contains a substance which is included on the TRGS 905 list of carcinogenic, germ cell mutagenic and reproductive toxic substances

Aluminium Oxide (CAS 1344-28-1)	Faserstäube, anorganische (außer Asbest), Künstlich hergestellte anorganische einkristalline Fasern (Whisker) aus Aluminoxid

butyl glycidyl ether; butyl 2,3-epoxypropyl ether (CAS 2426-08-6)	1-n-Butoxy-2,3-epoxypropan

France regulations

France INRS Table of Occupational Diseases

Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers (CAS 25085-99-8)	Maladies professionnelles provoquées par les résines époxydiques et leurs constituants 51
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (CAS 25068-38-6)	Maladies professionnelles provoquées par les résines époxydiques et leurs constituants 51

Product registration number

Austria	UFI: 1K15-71FY-G00N-EGFG
Belgium	UFI: 1K15-71FY-G00N-EGFG
Czech Republic	UFI: 1K15-71FY-G00N-EGFG
Denmark	UFI: 1K15-71FY-G00N-EGFG
European Union	UFI: 1K15-71FY-G00N-EGFG
Finland	UFI: 1K15-71FY-G00N-EGFG
France	UFI: 1K15-71FY-G00N-EGFG
Germany	UFI: 1K15-71FY-G00N-EGFG
Greece	UFI: 1K15-71FY-G00N-EGFG
Hungary	UFI: 1K15-71FY-G00N-EGFG
Italy	UFI: 1K15-71FY-G00N-EGFG
Netherlands	UFI: 1K15-71FY-G00N-EGFG
Norway	UFI: 1K15-71FY-G00N-EGFG
Poland	UFI: 1K15-71FY-G00N-EGFG
Portugal	UFI: 1K15-71FY-G00N-EGFG
Slovakia	UFI: 1K15-71FY-G00N-EGFG
Slovenia	UFI: 1K15-71FY-G00N-EGFG
Spain	UFI: 1K15-71FY-G00N-EGFG
Sweden	UFI: 1K15-71FY-G00N-EGFG
Switzerland	UFI: 1K15-71FY-G00N-EGFG

15.2. Chemical safety assessment No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.
AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).
CAS: Chemical Abstract Service.
CEN: European Committee for Standardization.
IATA: International Air Transport Association.
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.
IMDG: International Maritime Dangerous Goods.
MAC: Maximum Allowed Concentration.
MARPOL: International Convention for the Prevention of Pollution from Ships.
PBT: Persistent, bioaccumulative and toxic.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
STEL: Short term exposure limit.
TLV: Threshold Limit Value.
TWA: Time Weighted Average.
VLE: Exposure Limit Value.
VME: Exposure Average Value.
vPvB: Very persistent and very bioaccumulative.

References Not available.

Information on evaluation method leading to the classification of mixture The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements, which are not written out in full under sections 2 to 15

H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Revision information Physical & Chemical Properties: Multiple Properties

Training information Follow training instructions when handling this material.

Disclaimer ITW Performance Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.