

Hazardous Motor Selection Form

Date: _____

Per AS/NZS 3000, the responsibility for hazardous motor selection lies with the installer:

7.7.2.1 Responsibility for classification

The responsibility for the classification of a hazardous area (see Clause 1.4.15) rests with the persons or parties in control of the installation. The requirements are in AS/NZS 60079.10.1 for gas or vapour and AS/NZS 60079.10.2 for combustible dust. (AS/NZS 3000)

We require customers to complete the following checklist when placing an order involving a hazardous motor.

This form must be completed before manufacture can commence. Missing information will delay your order. This checklist ensures our sales team provides you with the correct and safe motor type for your application.

Advice and guidance: Please contact the electrical regulator in the applicable state/territory for advice.

Hazardous Location Order Checklist

Customer name: _____

Contact name: _____

Email address: _____

Project name: _____

Tag location: _____

Installation type: Inline Roof mount Wall

Speed control required: Yes No

Motor classification: Ex'e Ex'd Ex'n Ex't D (DIP) Ex'd'e

Select Gas/Dust Group: I II III

Temperature (T) rating: T1 (450°C) T2 (300°C) T3 (200°C)

T4 (135°C) T5 (100°C) T6 (85°C)

Range of ambient temperature: min _____ max _____

For Gas Group I or II

Select zone: 0 1 2

If Gas Group II, select option: IIA IIB IIC

If Dust Group III

Select zone: 20 21 22

Select option: IIIA IIIB IIIC

Customer sign off

Name: _____ Company: _____

Signature: _____ Date: _____

Hazardous Motor Selection Form

Information Sheet

Hazard Type

Gases and Vapours

Zone 0

Area in which an explosive gas-air mixture is continuously present or present for long periods.

Zone 1

Combustible or conductive dusts are present. Area in which an explosive gas-air mixture is likely to occur for short periods in normal operation.

Zone 2

Area in which an explosive gas-air mixture is not likely to occur, and if it occurs, it will only exist for a very short time due to an abnormal condition.

Dust

Zone 20

Area in which an explosive dust-air mixture is continuously present or present for long periods.

Zone 21

Combustible or conductive dusts are present and is likely to occur for short periods in normal operation.

Zone 22

Area in which an explosive dust mixture is not likely to occur, and if it occurs, it will only exist for a very short time due to an abnormal condition.

Gas/Dust Classification

Gas Groups

Gas Groups are divided into two categories.

Group I

Coal Mining Industry. (Methane)

Group II

Other Industries.

Group II is further subdivided as follows, and the representative gases for each group are shown as well:

Group I – Methane

Group IIA – Propane

Group IIB – Ethylene

Group IIC – Hydrogen

Dust Groups

Group III

Group IIIA – Combustible filings

Group IIIB – Combustible but non-conductive dust

Group IIIC – Combustible & conductive dust

Temperature or "T" rating

The source of ignition in a hazardous area can be an arc or a spark, or even a hot surface. Since electrical equipment generates heat in normal operation, we need to ensure that a hot surface on the electrical apparatus cannot ignite a surrounding explosive gas atmosphere or a dust cloud or layer. All hazardous materials have what is known as an "Ignition Temperature". This is the minimum temperature at which the hazardous material, when mixed with air, will ignite and sustain combustion without an ignition source (auto-ignition or spontaneous ignition).

The temperature of a layer on the surface of the equipment.

Code	Max. Surface Temperature
T1	450°C
T2	300°C
T3	200°C
T4	135°C
T5	100°C
T6	85°C

E.g. if the ignition temperature of the dust layer is 275°C then the equipment "T rating" must not exceed 200°C or T3.